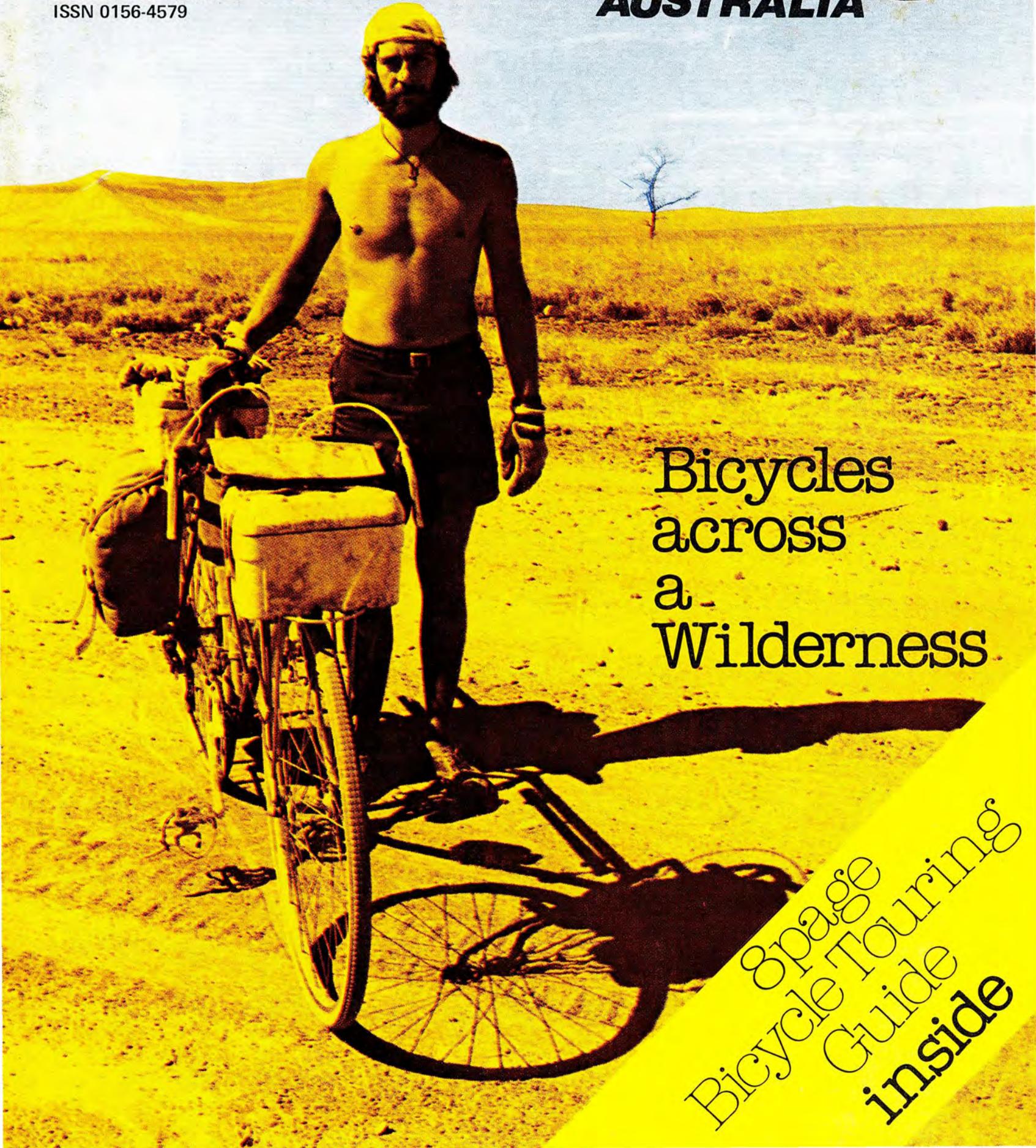


Freewheeling

AUSTRALIA

NUMBER 3 \$1.00*
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across
a
Wilderness

8 page
Bicycle Touring
Guide
inside

australian bicycle groups



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39 King Street, Ashbury
Ph: 798 4224

League of Wheelmen
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Secretary Les Oates (607 8435)

Green Valley Cycle Touring Club
Contact Russell Moore
Ph: 607 8686

Non Club Cycle Tourers
Contact Doug Sotheren
Ph: 85 4489 [H]

Cumberland Cycle Club
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Contact: Maurice Stanton
Ph: 648 5511 (W)

The Bicycle Institute Touring Group offers help to any one wishing to form a touring club or local cycle group. General NSW touring advice can also be obtained from extensive files now in the process of being catalogued. This BINSW group also produces a touring calendar twice a year and will advertise tours free of charge on the calendar to any non-profit cycle group. Contact Warren Salomon, ph: 211 1089 [w], or BINSW Bicycle Touring Group, 399 Pitt Street, Sydney NSW 2000.

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GPO Melbourne Victoria 3001
Hon Research Officer:
Alan Parker, ph: 56 2194

Melbourne Bicycle Touring Club
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Anybodys Cycle Club
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878 9038 [H]

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Contact John Richards, 729 6405

Waverley Recreational Cyclists
Contact Brian Schauer, 561 2214

Youth Hostels Association Cycling
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528 2536

Bicycle Institute of Victoria Touring Group offers help and advice to any one wishing to start a touring or general cycling club. All of the above clubs are represented by this group. For general touring info and club help contact:
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Canberra ACT 2600

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31 Bruton Street
Balcatta WA 6021
(Nicole Harrison)

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Freewheeling AUSTRALIA

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cover photograph by Denis Montalbetti
PAUL DENNY BETWEEN GIBB RIVER STATION AND KIMMINURRA
NORTH WESTERN AUSTRALIA

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P O BOX 57 BROADWAY NSW 2007

On the road to Tooma NSW. Murray valley in background.

Rambling...



Which is more dangerous, a bicycle falling 50 metres onto your head or one sharing a footway a couple of metres wide?

Answer, according to the NSW Department of Main Roads: They are of equal risk.

The reason for this somewhat silly question and even sillier answer is a recent stroll across the Sydney Harbour Bridge walkway — on the opposite side of the bridge to the cycleway which appeared on the last issue's cover.

The sign above is mounted at the entrance to the walkway and the one below is partway across it.



The cycleway, by the way, is one of the few in the state. The supposedly progressive Premier, Neville Wran, is not even in bottom gear yet.

Let's hope things will change now that he has won a sizeable majority.

If you're doing the Border Ranges tour described by Warren Salomon in the previous issue, take the two 1:250 000 maps as suggested and instead of a petrol company map, spend \$1.50 on the Casino project map from the Forestry Commission of NSW, 93 Clarence Street, Sydney, phone 20 236. Their postal address is GPO Box 2667, Sydney 2001 and there is no charge for postage or packing apparently. It's a 1:125 000 and it covers all the trip except for a small bit over the border. A few minor roads and a couple of lookouts are not marked, but otherwise it's a great adjunct to the others, particularly if contour maps confuse you.

Three of us did the tour anticlockwise in late September (watch out for an article on 37 ways to push your bike up 800 metres). We carried a little more than three litres of water each, which was adequate for the cool days we had climbing, on top of and leaving the Tweed Range. The last fill before the climb was Hanging Rock Creek and the next was a tank at The Blackbutts, just past Bar Mountain. It should be reliable, being a picnic spot, but when we arrived there was just enough to top up our bottles.

A bit further on is The Pinnacle and if it's not cloudy, the sunrise is apparently spectacular. It's one of the first places the sun hits in Australia, so be early.

* * * * *

In Kyogle, there is a caravan park as well as the showground for camping. The people at the bike shop, Barry and Frances Unicomb are particularly friendly and worth a visit whether you need bits or not.

Mount Warning from the Tweed Range NSW.



Unpleasant tasting water which is otherwise alright to drink can be improved by putting a peppermint (or any other flavour) teabag in your drinking bottle. It lasts for many refills and takes the rough edge off the water without flavouring it too much on hot days at least, when consumption is high.

* * * * *

What do you eat on tour? There are lots of things available everywhere which are suitable, don't come from a tin or packet and don't cost a fortune. We probably all get a little fixed in our ideas and diet and an exchange of ideas wouldn't hurt. Send in a sample day's diet, keep it brief and we'll run the more interesting ones.



One of the most appreciated items on my bike is handlebar padding. It comes as a tubular closed-cell foam with a 25 mm inside diameter which is perfect for slipping over alloy bars and is called Bradflex or Ensolex, depending on who makes it. The walls are 13 mm thick, but after some months of use they flatten out but still give good padding. It's good in winter too, because it insulates and keeps your hands open, improving circulation. Mine cost \$2.75 for a metre at Clark Rubber, but boat and car accessory shops sell it for roof rack padding. The only problem was fixing the bit between the end of the bars and the brake lever mounts. You could glue it, but a disc of plastic held in by screw-expanded plugs seems a better idea as it's removable. Being a closed-cell foam, the padding doesn't absorb water.

If you prefer to tape bars you may find they are better done with the sort of tape sold in sewing departments of big stores and drapers than with the stuff sold in cycle shops. The non-cycle stuff has no glue, doesn't exude it on hot days and is cheaper. The handlebar tape sold in cycle shops makes excellent rim tape for wired on tires and good first aid tape for campers and camping gear.



The Tweed Pinnacle

Got lever clamps on your bike? You have if you have quick release hubs. Don't do them up too tightly, they can exert a lot of pressure because of their design and are meant to be done up just so.

The tension adjustment should be done up so that the lever can be moved without straining on your or the mechanism's part.

* * * * *

How long before the Japanese take up the new cam drive system and bring us easier shifting and maintenance with a wider, 'infinitely-adjustable' gearing. The system, fitted to the BioCam Beta, took more than an hour off the US 150 mile (around 240 km) record recently, bringing it down to less than 7½ hours. The Beta sells for \$1400, so unless the Japanese mass-produce it, we're unlikely to be able to afford it for some time.

Feel like writing, drawing or photographing for *Freewheeling Australia*? Please do, just send it off to us at P.O. Box 57 Broadway NSW 2007. We can't pay you yet, but it's fun and it helps spread the word.

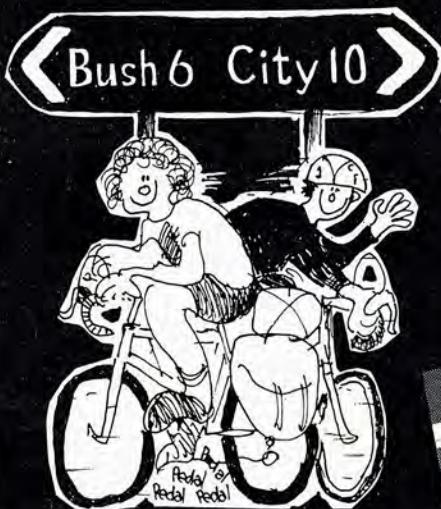
Michael Burlace

DEPARTURE: Cycling Tour Cairns to Melbourne

I am planning to do a bicycle trip from Cairns to Melbourne in September-October 1979, and I would like a companion/s interested in doing the same thing at the same time. If interested, please contact me so we can make plans.

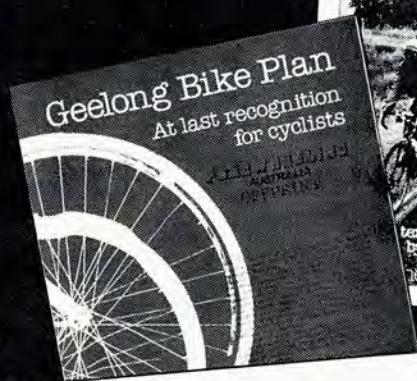
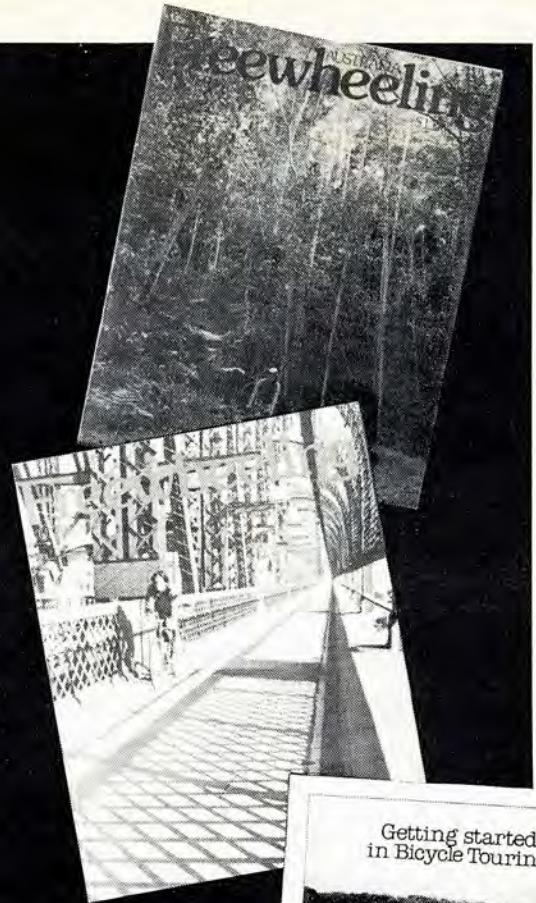
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paper the poster measures 572 x 450 mm. Simply send one twenty five cent stamp with your name and address to publisher to cover return postage. See bottom of previous page for reduced poster design.

Freewheeling Australia is distributed nationally through bike shops and selected bookshops and

newsagents. New retail outlets are always welcomed. (Enquiries from Publisher.)



Dear Freewheeling,

It's great to read a good quality Australian-produced cycle touring magazine. We've been thrilled about it here in WA.

However, we were very disappointed at the drawing which accompanied Juel Briggs' article on 'Women and Cycling' in your number 2 issue. Although it may have been a bit 'women's lib bish' for some, this article made some worthwhile points. On the other hand, we found the drawing on page 17 to be tasteless and crude, and not at all in keeping with the idea that *Freewheeling* is meant for distribution among cyclists of all ages and sensitivities.

Personally, as a female and as a serious cyclist, I was ashamed to see the excellent points raised by Ms Briggs (in particular, the concluding paragraph) spoiled by the drawing on the facing page.

Nicole Harrison
Secretary, Cycle Touring
Association of WA (Inc)

The graphic on page 17 was not printed with intent to offend; just as Ms Briggs' article was intended to be observed with some sense of humour.

If we are to insist that these pages be taken with ultimate seriousness, then we can assume that the graphic on page 17 represents the position from which males have been viewing females for centuries. Certainly, this symbolic view is not funny at all.

It seems that 'serious cyclists' view themselves as members of an elite, glorified section of society. Isn't it time we viewed ourselves as members of a unified effort to make the earth a cleaner, happier place — a little bit of humour helps along the way.

Editors

Dear Freewheeling,

I regret not having an opportunity to reply to David Cholson's letter before *Freewheeling* 2 went to print. I feel this letter needs a reply to correct some misconceptions that have been perpetuated in the literature including that otherwise excellent book by Richard Ballantine.



Getting back to David's first point, yes there are too many lemons available in the under \$200 category, in fact it is almost impossible to buy a reliable, safe bike in this category. I would refer David to the *Sydney Morning Herald's* articles on 'Buying a Bike' published September 15, 22 and 29.

Coming to brakes, decent sidepull brakes are not expensive. Some of the best are Universal and Weinmann. Both are well under \$20. I myself use Universal because I regard them as being superior to Dura-ace and possibly Campagnolo. The set on one of my bikes has had over ten years hard use and is still in excellent order.

Touring Brake Levers, by David's own admission are dangerous and most people would assume that they are put there to apply the brakes (aren't they?). Most manufacturers confess that they would rather see them off, but admit that they are a current fad and without them they cannot compete with the rest of the market.

Getting to alloy rims, David unfortunately has a gross misconception. I have been using alloy rims with 'wired-on' tyres for about the last 200 000 km and have ruined three and that took some

Above: 1978 marks the Centenary of the Cyclists Touring Club and the British Cycling Federation in Britain. These four stamps were designed by Fritz Wegner, and were issued on 2 August, 1978 to commemorate this event.

effort (one cliff, one car, and one I can't remember). I even use them on our tandem for touring (all up weight of bike plus riders in excess of 180 kg). From my experience and observation, and observation of other people's steel and alloy rims, steel rims dent very easily (mild steel is used, not tempered) leading to increased braking problems.

Regarding the rib type of helmets, my observations of racing accidents are confirmed by the many medical men who have written on the subject. Good helmets are now arriving on the market (MSR from Biketech in Newcastle, Bell from many Sydney bike shops) and I guess the amount of protection a person gives to their head depends on their estimation of its worth.

Chas Coin

Dear Freewheeling,

I think your magazine is great! the articles and photos are brilliant, and both issues were tastefully done as well as thoroughly covering all aspects of cycling.

I would like to see more articles about bicycle maintenance, especially since I am just learning to repair my bicycle myself.

My specific problem is one with spokes; and I would be especially interested in knowing how to:

- 1 solve the problems of constant spoke breakage;
- 2 how to build and true a wheel; and
- 3 what is the best type of wheel for me.

Thanks for printing this valuable magazine — keep pedalling!

Penny Waites
Annandale NSW

*Good news! This edition of *Freewheeling* covers spoking wheels and how to build your own trueing jig by our own Chas Coin. We also recommend 'Building Bicycle Wheels' by Robert Wright, available at BINSW, 399 Pitt Street, Sydney 2000. \$2.35*

Bicycles and Bush Clergymen

by Jim Fitzpatrick



Rev. D. Murphy of Willoughby, Circa 1897

The question of whether or not the bicycle was a basically evil device was much debated in religious circles around the world when the machine made its appearance on the scene. The bicycle ostensibly conveyed its rider unerringly into immorality and sin — if not hell itself. For many years the attitude of various religious groups in Australia towards the bicycle, taking their cue from Heaven and abroad, was reserved at best, and more likely condemning and antagonistic. For a while this was quite sustainable. However, with the influx of vast numbers of safety bicycles, including female riders in abundance, the church and society had to resolve the problem. By the mid 1890s the popularity of the machine and its use by respected members of the community such as doctors, academics and government figures led to a gradual religious acceptance although racing, Sunday riding and, to a lesser extent, its use by women was not fully condoned. In that the wealthier and 'trendier' members of colonial society tended to live in the large cities, it is not surprising that the forefront of social cycle usage was located there. However, it appears that the various clerics personally used the machine to varying degrees — the higher the rank the less likely a clergyman was to be found pedalling.

Smith's study of the bicycle in the US suggests that by 1895 or 1896 the machine was religiously accepted, if resignedly, in American cities, although there was still great resistance in rural communities. However, the Australian acceptance appears to have been a bit slower in coming. In early 1898 the New South Wales *Cycling Gazette* wrote about the Rev Daniel Murphy of Willoughby. It pointed out that *the church seems still undecided in its attitude on the question of cycling*, but featured his use of the machine as evidence that the bicycle had probably received the clerical stamp of approval. The writer went on to state that Murphy, as a result of his recent solo ride to Melbourne in late 1897, was *the first member of the clergy to essay a journey of any length*.

Unfortunately, as with many other cycling matters in Australia, the eastern journal failed to take into account Western Australia. Clergymen had been using the bicycle extensively on the gold-fields for at least 3½ years. One, Thomas Trestrail (also Trestrail), sought aid to buy his bicycle by writing to the editor of the *Western Mail* in Perth, in July, 1894, and the letter was reprinted in a Coolgardie newspaper the same month. In asking for a subscription to be established in his favour he pointed out that *I have no money, it is very scarce here. From outlying places comes the call to me — 'Come and help us' — but I am unable to respond to these calls except*

that I walk distances of 30 to 100 miles. A good bicycle (none but a good one is any good here) can be delivered to me for about thirty five pounds.

In addition to Trestrail, other West Australian clerics were quickly on the scene and adopted the bicycle eagerly for use on the gold fields. Given the extensive distances to be covered, they required some form of transport and the cost and upkeep of horses and camels

*Rev. Thomas Trestrail of Coolgardie,
Circa 1895*



were prohibitive. To solve the problem, Trestrail's cry of 1894 was unequivocal:

*Mothers and sisters of W.A.
Your sons and brothers
are surrounded by very strong
influences. Send me a bicycle
and I will go to them*

And go they did. Trestrail conducted services at Kalgoorlie from his Coolgardie base and various other clergymen have been cited as using the cycle: Tom Allan on the Kalgoorlie — Kambalda circuit; Father Duff, *the cycling priest of Coolgardie*; Frank West, of Boulder; Arthur Fry and Arthur Hay of Coolgardie; and H Poole of Menzies, *a scorchet at that*. All were among the examples of muscular christianity to be found on the fields.

The Rev A Sussex, appointed to Mt Magnet in 1899, covered thousands of miles on his machine ministering to a vast area. On November 26, 1900, he wrote to his fiance:

During the last week my work has taken me to Morgan, Mertondale, Tampa Kookynie, and Niagara, far distant fields. This week I go to Diorite, away north. Next week, I expect to visit Mertondale, again, and the following week Darlot, 90 miles north and Lawlers, 88 miles NW. The distances are great but the work must be done.

His 400 miles of travel in the four weeks is even more impressive when it is appreciated that his temporary base in Leonora was itself 263 miles from his Mt Magnet headquarters. The riding was at times difficult, with heavy roads, wind and lack of accommodation. It is not surprising that he could almost joyfully note that:

When in Lake Way last week a happy idea struck me. By running down to Mount Magnet via Cue, I could cut off fully 100 miles, no small consideration on summer days.

His first day on that trip he covered 130 miles, camping out at night. By 10.30 the next morning he had put in another 60 miles to reach Cue. The next morning he rode the 56 miles to Mt Magnet *in really good style*. The following afternoon he left for Walduck, 40 miles distant, where he spent the night with a friend. The following day he made for Lawlers, 140 miles distant. He rode some 425 miles in the five days, getting him back to Leonora in time to rest a day before conducting services on Sunday.

With such travels it is not difficult to credit the Rev Hay's account of having ridden 7 000 miles in one year. For a six day work week that amounts to only 22.4 miles per day, not at all unreasonable for a circuit including Coolgardie, Kunnannalling, Bonnievale, Burbanks, and Kintone, among others. In fact, the Rev Hay's investigatory 350 mile return-trip pedal from Coolgardie to Mount Malcolm in mid-1897 led to the establishment of a permanent clergy in the area. The trip was cited as an indication of the *aggressive spirit* of Wesleyan Methodism on the fields, and provided such non-religious news items for the readers as a detailed description of the Mount Malcolm reef and mining operations, and the fact that business in Niagara was dead, as was the man for whom burial services were conducted. In comparison the Rev Benjamin Moffatt's 2 500 miles of pedalling and walking in the Kalgoorlie area over a 16 month period in 1895-1896 seems relatively insignificant.

Perhaps the most famous ride in the goldfields was by the Rev A Burton, who left Norseman to pedal 150 miles east to Balladonia to conduct a wedding, with



Church Parade, Victoria, Circa 1896

only one intervening property located over the distance. He wrote about the trip in the *West Australian Church News*, in August, 1899, and the story was subsequently picked up and reported by various newspapers and eventually recounted by goldfields chroniclers as part of the local lore. However, the journey was in fact no more spectacular or unusual than many others ridden by the sandgroper clergy in the course of their work.

The use of the bicycle was not restricted to the Western Australian clergy of course. The Rev Gilbert White, in the year immediately preceding his consecration as bishop used a bicycle in his travels through the country west of Townsville. One year he tried a horse and buggy, but the blacksoil plains proved too difficult to negotiate. The following year he tried a horse but it ate poisonous plants and died. Consequently he attempted the journey with a bicycle in 1899. As with many rural cyclists he found great ingenuity required to reduce my luggage, including books and a large

water-tin, to 40 lb in weight and a convenient shape. Although he commented upon the ease with which he could travel with the wind behind him, he also had to walk some 25 miles at one stage into the face of a southerly gale. On one occasion he fractured the frame after a drop on a rough basalt road and had to ride with a makeshift repair until adequate repair facilities could be reached. One clergyman at Chinchilla (Qld) used to make once-monthly 75 mile circuits, carrying out services in 'Skipton Park', Drillham and back to Chinchilla for the evening service. And in late 1896 Richardson, on the first trans-Nullabor ride, met the Denial Bay (SA) minister on his bicycle east of Penong.

It appears that the clergy on the Western Australian goldfields were probably among the world's leaders in adopting the bicycle for daily use. The author is aware of no arguments or discussions such as occurred elsewhere as to whether or not it was appropriate for them. As with many other travellers on the field, it presented itself as an obvious

solution to a difficult problem. And as was wont with other situations in the hot, arid, expansive Australian bush, when it came to transport, God was undoubtedly granted to be a very practical deity. The theological debates so prevalent elsewhere most likely seemed far removed when viewed from the perspective of the Yilgarn Plateau. That they were undoubtedly in the forefront of clerical utilisation of the bicycle is evidenced by the reaction of a London newspaper. It was responding to an interview of a recent returnee from Western Australia who had advocated the use of bicycles for the English clergy, including the bishop. The paper advised that *it is scarcely the office of a bishop to be roving about his diocese on a cycle gossiping with old people and children . . . Dr Kennion has evidently not quite shaken off his Australian experiences.*

It must have appeared obvious on the fields that something so efficient at delivering the message of God to the parishioners, and the bush parishioners to the Church, could not be entirely evil. But the message was slow to spread.



karrimor

ADVENTURE WHEELING

There's nothing quite so enjoyable as touring by bicycle, providing that the machine and its equipment are tailored to your personal needs. If they are not, riding will be much less easy and carefree than it should be, detracting from the sheer fun and pleasure of wheeling independently and contentedly along. Choose with care.

Of course, cycling is healthy, economical, environmentally desirable, instructive, enjoyable and many other good things. They are all quite incidental though real attributes. The main thing is that it provides a complete release from tension, is good fun, and engenders a philosophy of life which is tolerant, takes things as they come, and generally provides exactly the antidote to modernity which many seek – and increasing numbers find – on a bicycle, of all things !

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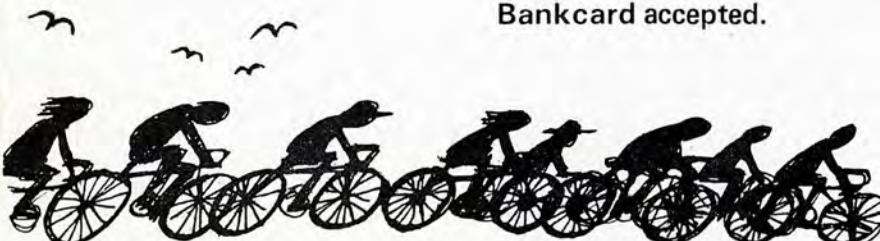
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commuting and touring around the nation's capital

by Helen Newsome

Canberra is an attractive city, not just because of its design but because of its landscape setting, both in terms of the natural countryside which surrounds the capital and the metropolitan area itself.

There is a traditional community involvement in both helping to establish Canberra's landscape image and also in making use of it. Suburban gardens are one reflection of this; appreciation of the excellent opportunities offered by such a setting for sport and recreation is another.



The rivers and hill reserves, the sport-fields and playgrounds and the urban lakes and their lakeshore parks attract users of all age groups. Access to these areas is easy. Office workers are able to jog in their lunch breaks; weekend orienteers use the nearby pine forests for their events and Canberra families picnic by the Murrumbidgee River which flows through the southern part of the city.

It is no surprise to find that there is also a growing interest in cycling in Canberra. Once the province of school children, cycling has "caught on" with adults who are becoming both commuting and recreational cyclists in growing numbers.

As in other parts of Australia there are those who see cycles as an alternative to the expensive energy-consuming private car or as contributing to physical fitness. It is certainly no coincidence that the resurgence of interest in this simple mode of transport is taking place at a time when there is a great deal of concern in the national capital with quality of life issues and the opportunity still exists to preserve and enhance what is considered by many to be a fragile environment.

Pilot Scheme

The authority which plans and constructs Canberra, the National Capital Development Commission, has had an interest in planning for cyclists for many years. After considerable discussion with community groups the NCDC ran its first pilot scheme on cycleways back in the early 1970s when it built and monitored a cycleway from a northern suburb, Dickson, through some of Canberra's older suburbs to the outskirts of the city centre area. It monitored the path in July 1974 and again in May 1977 and found that its use appeared to have increased by 100 to 200 per cent in that period. The levels of use by school children, however, had remained relatively constant; the increase was from greater usage by adult cyclists. A number of other results relating to trip types and distances and to distribution and intensity of use emerged from this survey and have proved useful to the planners.

A Cycleway in a New Town

Planning for Canberra's third new town, Tuggeranong, was commenced in 1969. This exercise was quite different from previous planning for Canberra's new towns, in that in the initial stages it brought together a wide group of people to help review basic planning precepts. This group included sociologists, community leaders, educationalists and welfare organisations. They applied themselves to the particular problems of this new town and its context in the overall plan for the metropolis. Their reappraisal confirmed the need for more lively relationships between certain activities in the community, for a more flexible approach in the planning of residential communities and for more deliberate planning for safe movement for cyclists and pedestrians within the new town and between towns.

Consequently the planning for Tuggeranong shows evidence of some departures from previous concepts in Canberra. For example, wider patterns of interaction among people are assumed. Longer walking and cycling distances are considered to be acceptable with evidence that cycling is no longer restricted to school children in their own neighbourhoods but will include commuters and recreational cyclists.

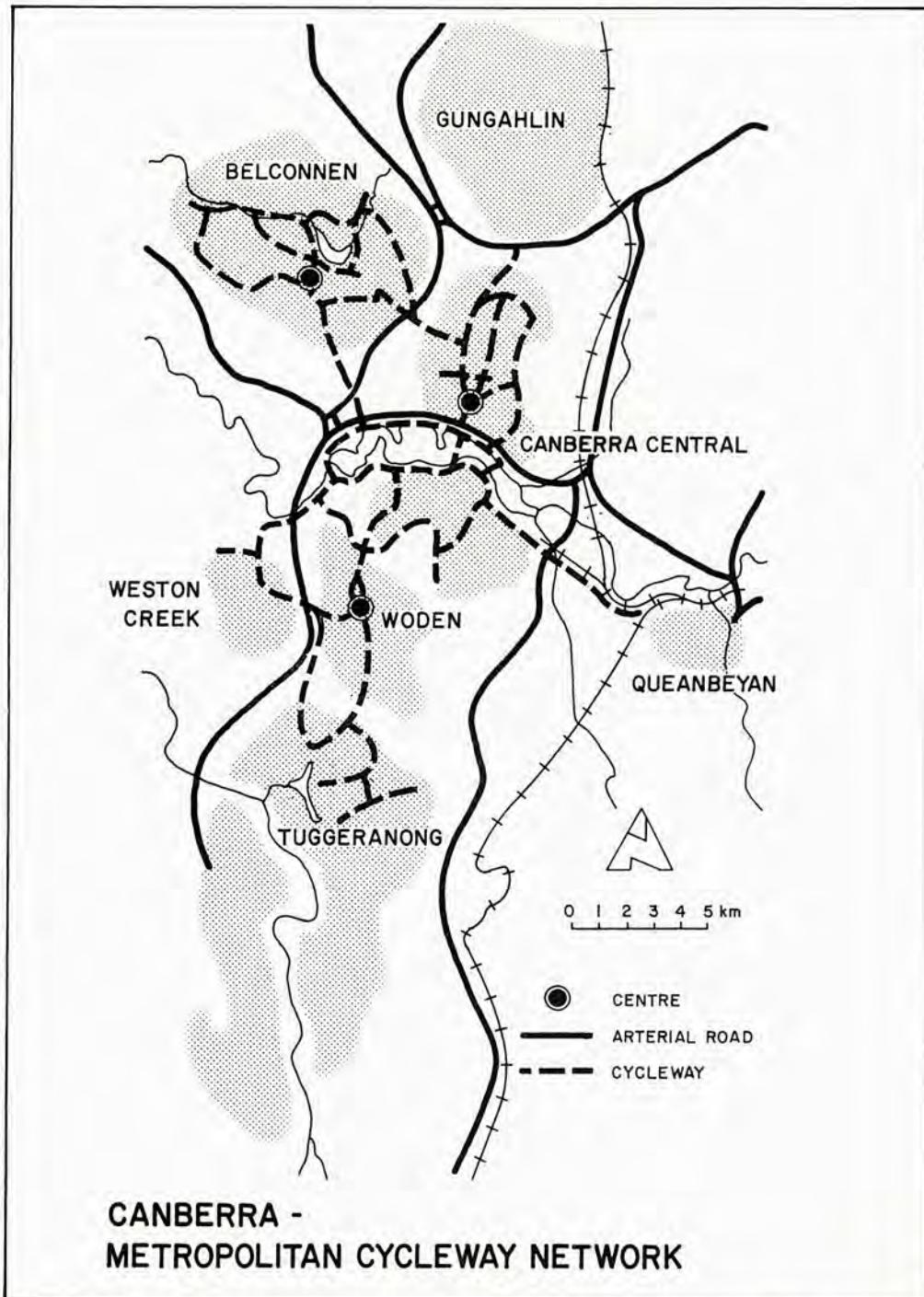
Tuggeranong is an area of exceptional beauty, lying in the valley of the Murrumbidgee River and bounded by magnificent mountains, valleys and hills. Its potential for recreation could not be ignored and the decision was made to plan so that equestrians as well as pedestrians and cyclists would be able to take advantage of these opportunities.

The most important aspect of the Tuggeranong planning studies with regard to the needs of 'off-road' movements was

that planners were given the chance to get in at the 'grass roots' level quite literally. In other words it was sufficiently early in the planning process for the designing and staging of a network of paths and trails to become a routine component of the Commission's development program for the new town. The system of paths and trails could be catered for when initial servicing of the land was taking place and at the same time as drainage and roadworks. In this way attention could be paid to the points at which conflict might exist between major engineering elements such as arterial roads and floodways and the pedestrian, cycle and equestrian trails. The construction of underpasses and overpasses, for example, could be included in the initial engineering contracts.

The details of planning for Tuggeranong have now been documented in a number of different NCDC publications, the most relevant to cyclists being Planning Concepts Canberra Paper No. 10 (November 1977) AN OFF-ROAD MOVEMENT SYSTEM, which is freely available from the Commission.

The most interesting point to make here, however, is that an attempt has been made to provide, in a systematic way, an off-road movement system to serve a new town, and to be linked with and function as an integral part of a total metropolitan network. This will gradually be accomplished by having the various sections of the network in the new town constructed as part of development con-



tracts and in time to serve the local needs of the earliest residents as they move into their new homes.

This policy has now been in progress since 1975. Sections of trail are completed but the system will not 'read' as a total network until a substantial part of it exists and the many land uses which it is intended to serve are also functioning.

The Tuggeranong network is being monitored progressively. It is also included in a long-term survey of social development in Tuggeranong being carried out for the NCDC. Pedal Power has assisted the commission in evaluating the scheme as far as it exists and has offered constructive criticism, something greatly valued by the commission which depends on this kind of user participation.

The Metropolitan Network

While the planning for Tuggeranong was taking place, the established areas of Canberra were also under scrutiny as the planners devised a master plan for the metropolitan cycleway network and worked to have the Dickson to City path extended over Lake Burley Griffin to the south side of the city and the town centres linked. (The accompanying map shows the metropolitan cycleways network. The paths feeding into the network — part of Canberra's normal footpath system — have not been included in a map drawn to this scale.)

Consequently the last twelve months have seen the laying of many kilometres of cycleway. The town of Belconnen to the north-west is now linked with Inner Canberra and the Woden Town Centre to City Centre cycleway is rapidly snaking north across the landscape as construction continues.

In accommodating cycleways in the already established areas of Canberra, the National Capital Development Commission has faced the usual tasks of building cycle crossings, installing sign posting and altering kerbing. The absence of the necessary infrastructure for a cycleway (i.e. underpasses etc) is typical of most established areas and the grid pattern of old Canberra has also created some difficulties for cycleway planners as it no doubt has done in other cities. However, the overall task has been made simpler in Canberra for a number of reasons. Since the NCDC took over the task of planning and constructing Canberra in 1958, there has been a greater emphasis placed on the natural topography of the land being developed and on the provision of areas of open space which in many cases are linked to form continuous green spines. This planning approach obviously lends itself to the planning of cycleways. The policy of locating the new towns in a series of valleys, separated by ridges and extensive areas of open space, however, has created difficulty with regard to the gradients of



Cyclists using a cycle crossing on a major road close to Canberra's City Centre.

some sections of the cycleways which link the towns and also means that funds have to be found to both construct and maintain extensive lengths of cycleway.

A further feature of NCDC planning has proved a bonus in accommodating cycles in areas established since 1958. There is an extensive system of pedestrian paths which serve the residential areas, feed into the main activities of the towns and which the law in Canberra permits cyclists to ride on. While dual use of such paths is a controversial issue, cyclists are likely to retain the legal right to do so

if they use paths with discretion.

The NCDC has defined the word 'cycleway' as 'a route which can be used by cyclists'. In Canberra, therefore, some parts of such a route may be on the conventional footpaths mentioned, others on roads chosen because of their low traffic volumes and some sections of a route may be on paths built specifically for cyclists.

A brochure published by the Commission for cyclists late in 1977 indicated Canberra's cycleways as they existed at that time, as they will be by December,



A new neighbourhood in Canberra's new town, Belconnen. Nature's contribution to this site has been modest but the neighbourhood plan which segregates traffic (note: arterial roads, feeder roads, culs-de-sac, cycle paths and footpaths) and the presence of an environmentally-aware residential community will combine to create a safe and attractive place to live in the future.

1978 and how they may be developed in future planning. The paths are being laid in two widths: 2.5 metres for spine routes expected to have heavy traffic volumes and 1.8 metres for recreation paths and paths expected to carry low volumes.

Monitoring and Surveying

In addition to the monitoring by the NCDC of the north Canberra cycle paths referred to earlier, other surveys and counts have been carried out and are now contributing to the bank of information on cycling in Canberra.

In late 1975 data on ownership and usage of bicycles was collected from 2,000 households in Canberra as part of studies carried out by the NCDC.

A comparison between north Canberra (where the latent demand for cycle usage may have been tapped by the existing cycle path) and the metropolitan area as a whole was made possible by this study.

The data appeared to suggest that, even though ownership of bicycles may have been at the same rate in north Canberra as the rest of the metropolitan area, bicycle use was considerably higher in north Canberra. School children tended to dominate the metropolitan use of the bicycle, but the age of cyclists in north Canberra was higher with an increase in the use of cycles by fulltime employees and those working in the home and a significant contribution by tertiary students.

Though other factors, including demographic changes, may have been influential, it seems likely that the presence of the cycleway has made a significant contribution to the increased use of cycles in north Canberra.

A "Travel to School" survey was conducted by the A.C.T. Schools Authority in May 1977. This aimed to find the usual method of travel to school by students of 35 government and non-government primary and secondary schools in Canberra. The survey revealed a number of interesting facts, including an increase in the number of students who cycle to school throughout government and non-government primary and secondary schools. The information from this survey is now being used for planning purposes by the Department of the Capital Territory and the NCDC as well as the A.C.T. Schools Authority.

Figures are not yet available from a count done by the NCDC of cycle path daily volumes in April this year, at eleven separate controls throughout the Canberra metropolitan area. It already seems clear however that where cycle paths provide access to major elements in the towns,

such as the colleges, weekday usage is high. Where sections of cycle path have been recently built adjacent to residential areas and do not yet lead to employment centres they are being used as recreational trails and weekend usage is accordingly quite high.

Emerging Problems

Already problems are emerging in developing a cycleway network of such an extensive nature. Maintenance of the paths once they are in use is an obvious issue.

Landscaping of the area immediately adjacent to the cycleways is considered



by the NCDC to be an integral part of developing the system. Canberra's long periods of very dry weather create problems associated with soil stabilisation and runoff, so revegetation after completion of construction must therefore be as rapid as possible. Problems of sub-soil drainage, on the other hand, can best be avoided by anticipating off-road needs early and catering for them in major engineering contracts. Unfortunately this opportunity has been lost in most older areas.

It seems likely that the "long-haul" cycleways which link the towns may well have the lowest usage and their construction and maintenance (the latter being the responsibility of the Department of The Capital Territory) has been difficult to justify on the basis of predicted use. Because of the structure of the metropolis however, these cycleways represent the only alternative for the commuting inter-town cyclist to the high-traffic arterial roads which link the towns. Most of the serious and fatal injuries to cyclists have occurred on roads such as these in Canberra. Consequently the NCDC has gone ahead with the construction of the inter-town cycleways.

Commuters, still a cycling minority in Canberra, are the most vocal group. Planners make good use of their active interest in the planning of cycleways, without neglecting the needs of the majority who require safe routes to educational facilities and attractive recreational paths.

Some paths designed to take the more direct route for commuters are liable to criticism on the basis that they expose the cyclist to excessive exhaust fumes. In another instance a route planned to avoid just this problem by "taking to the bush", rather than running parallel to the arterial road, is under fire because the route is considered to be too winding and long for the commuters.

The axiom that you can't please all of them all of the time but only some of them some of the time seems to apply as well to planning cycleways.

Construction of Canberra's metropolitan cycleway network continues. Canberra's autumn days are proving irresistible to recreational cyclists and an enterprising cycle hire company is doing good business from a caravan set up at weekends and school holidays near a cycleway by Lake Burley Griffin close to the City Centre.

Tourists welcome the opportunity to get out of their cars and cycle around the shores of Lake Burley Griffin while viewing some of the most interesting 'national' features of the capital, such as the National Library, Parliament, the Carillon and the National Art Gallery and High Court which are both under construction.

Cycling has become a fact of life in the nation's capital!

TIME TO GET TOUGH

by Paul Dimmick

I am sure that all you environmentally sound, inoffensive and healthy cyclists are getting thoroughly sick and tired of the way you are being treated by road hogging motorists, roads authorities, the law and the police. How can this unsatisfactory situation be overcome? **Stick up for your rights!** It's time to get tough.

Watch it though, I don't mean force your right of way over a fully laden semi who is trying to bully you into the row of parked cars. Instead, move over, let him go, then pull out your pen and paper and take his number, time of day and place. Take this information to the police traffic branch or to any local police station and ask to make a statement. This is the document on which all the relevant details are recorded. What action is to be taken next is decided from this statement so make sure the account you give is dramatic, indicates the trauma you suffered but most importantly is correct and precise as it is a legal form.

It is a good idea to have a quick look at the area where the incident occurred before you leave for the police station and get a clear mental picture of what happened. (Lane markings, parked cars and traffic lights.) Also try to get a witness and include his/her name in your statement.

If the police are reluctant to take a statement (they usually are with cyclists because little money is involved in the damage done) and you seem to be getting nowhere take the policeman's number and ask to see the inspector. I have only

once had to go to this extreme. Make sure the statement is correct before you sign it, always remembering that you do not have to answer any question put to you at this stage unless you wish.

This procedure may sound complicated but it rarely takes more than ten minutes once you arrive at the police station and is reasonably straightforward. Surely you can spare this small amount of time to make cycling more pleasant for others and possibly save your life.

A few words as to why I feel that such steps should be taken in even such petty cases as having to brake hard if a car deliberately turns in front of you. Have you ever wondered why motorists behave in this rather offensive way? If you have I'm sure you came to the conclusion that it is largely because they know they will get away with it and therefore ignore the cyclist's rights. And why do they get away with it? Because the police and the other relevant authorities ignore the complaints and pleas of the minority. Why are we ignored?

- 1 Because a cyclist involves little cost, and
- 2 Because the statistics say that the cyclist is not a major problem area in traffic control.

Why do the statistics say this? It's because most cyclists report no accidents because they think they will be ignored. As you can see by now, it's a vicious circle. As I said before *It's time to get tough. Stick up for your rights.*

You must do something in all minor

cases because when it comes to a major case where the police are interested it's too late, you're dead! And that is not exaggerating. A death is the time when enough money is likely to become involved to automatically interest the police.

Of course if the incident is a genuine accident and the driver is apologetic and explains him/herself and offers you any assistance necessary and pays for any damage, show courtesy in return and think carefully as to whether you feel they should be charged before reporting it to the police. However if you have received any injuries whatsoever have them inspected by a doctor in case they develop into something serious as compensation cannot be claimed if no official record (eg police report) of the injury exists. In Tasmania there is a three-year limit to such claims.

Remember these seven points . . .

- 1 Don't put your life at risk to get your rights.
- 2 Report all accidents.
- 3 Have all injuries inspected by a doctor and mentioned in a police report.
- 4 Be persistent with the authorities.
- 5 Cycle abuse is perpetuated by a vicious circle.
- 6 You can help break it.
- 7 We've been meek and mild for long enough. It's time to get tough.

Paul Dimmick is Safety Officer for Pedal Power Inc of Tasmania.



The Trip of a Lifetime



by Denis Montalbetti

Arrived in Sydney in late November filled with curiosity and excitement, eager for the adventures awaiting me. With three years of bicycle racing experience plus two tours all behind me I decided to tackle a grand excursion by bike around Australia. My longest previous distance was 500 km from Vancouver to Ottawa. Ten months and 17 700 km later an exhausted 21-year-old pedalled into Sydney completing the round-Australia trek.

After a week of night life in Sydney I departed for Melbourne, the first of the three pleasant sections of a six-leg journey. This initial trip followed the coast route plus it gave me a reliable idea of cycling conditions in Australia. From Melbourne I did a terrific mini tour taking in the spectacular Great Ocean Road, Halls Top and Ballarat before returning to the Victorian capital. Then I rode inland to the Murray Valley to spend 2 months fruit picking before setting off for Perth. These trips varied from 1000-1600 km with water and food readily available. However, most of the remaining portion of the journey would be through dry and uninhabited areas.

As the highway snaked its way through desolate areas the journey became a challenge which proved to be extremely rewarding and of these uninhabited sections there were three, each different. The Nullarbor was crossed during mid-April and due to pleasant temperatures with tail winds I managed an average of 200 km per day. Also the highway was excellent with sufficient water tanks and road houses to ensure a smooth ride.

During late July touring conditions between Three Ways NT, and Camooweal Queensland, were the most demoralising conditions ever encountered as we (cycling with Paul Denny at this time) endured vicious icy cold head winds which limited our progress to a dismal 90 km per day; furthermore, the monotonous terrain was only sparsely vegetated and abandoned stations are common in this merciless land. However, the Port Hedland to Kununurra route proved to be more of an endurance test due to 1000 km of severe road conditions. Over a period of a week I reached Broome on a sandy road so shocking that walking the cycle was necessary on many occasions. Teaming with Paul Denny at Broome we tackled the crippled Gibb River Road

which had a surface of bull dust, creek washouts, deep sand, severe corrugations and long stretches of razor-sharp loose rock. Dirt roads are mentally frustrating when one can only maintain 6 km/h; in addition, they are physically punishing as 100 km was more exhausting than any one day on bitumen. One is continuously pedalling just to keep mobile. Dry weather is essential for this section of the journey as rain makes these tracks quickly impassable. Normal mechanical breakdowns and minor health problems tend to magnify any tension in a travelling relationship. On such uninhabited roads water and food are necessities. I always carted 5 litres with a minimum of three days' food rations. These three long legs ranged from 3800-5500km and a minimum of a week's rest was required after the completion of each adventure.

Much of the journey was cycled solo only riding with an English fellow briefly on the Nullarbor plain and with Paul Denny of Sydney from Broome WA to Townsville, Queensland. Although I travelled two thirds of Australia solo this accomplishment gave me a feeling of self-satisfaction; moreover, I was a changed person upon my arrival back in Sydney.

Nullarbor Crossing

by Denis Montalbetti

While I was picking grapes in Robinvale (near Mildura), I had visions of what the Nullarbor crossing would be like. I knew very well that it would be desolate and flat. Just thinking that I would look ahead and behind and see no one made me boil with excitement: it is a very special sort of freedom to me.

The time came when I had to say goodbye to friends that I made. Many told me about the Aborigines who supposedly throw rocks at cars along the way, others just thought I was game, or nuts, or both. I arrived in Adelaide, my last city until Perth. Here, I met a school teacher from Ceduna who eased my mind about the stories I had heard about Yalata Mission Aborigines. Moreover, he knew another school teacher at the mission and would try to arrange for me to stay at the mission for a day.

Port Augusta was my first experience of desert-like conditions, as this was drier than the Nullarbor Plain itself. At Port Lincoln, I took my first day off since Adelaide. It is a small fishing town, a rather pretty place and very green. I arrived in Ceduna eight days after leaving Adelaide. My school teacher friend confirmed that I would be welcome at Yalata for a while. I ended up spending five days there, after 200 km of heat and headwinds to reach it. Here I saw the children collect and carve wood into boomerangs, emus, kangaroos and wombats. An old tribesman tried to teach me the skill of

throwing a returning boomerang. Marie (the school teacher) and her friends made me feel very welcome and showed me around the mission area. My stay at Yalata was certainly one of the highlights of my journey.

Shortly after leaving the mission, I met another cyclist headed for Perth. We rode together until Norseman and averaged about 200 km each day. Although the road passes through only about 40 km of the true, treeless Nullarbor, the distances between the road houses are long. The terrain was flat and the countryside was very dry, dotted with scrub and inhabited by plenty of rabbits. My 7 litre waterbag made it easy for me to pedal the distance between water tanks. The road houses had a limited selection of food, and their staffs were generally unfriendly: I remember at Balladonia the manager finally gave in and sold me a loaf of bread for 75c! The travellers we met were friendly and admired us pedalling to Perth.

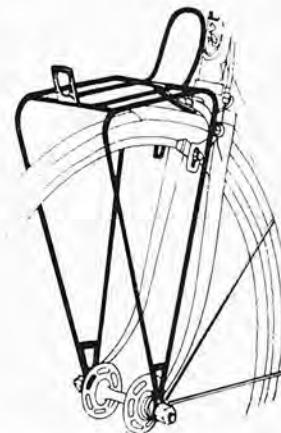
From Norseman I was alone again, and I headed down to Esperance and on to Albany. I found Albany beautiful, and enjoyed cycling through green countryside again. From here on I began to feel eager to reach Perth, and pushed on through the lovely karri forests of Manjimup, then Bridgetown, Nannup and Augusta. I took the time to visit Cape Leeuwin and the fantastic Jewel Caves before the final two days' ride to Perth, and the completion of one more leg of my journey around Australia.

Below: Head of the Great Australian Bight where the sand dunes meet the cliffs.

Denis Montalbetti



cycle bags & frames for touring or town



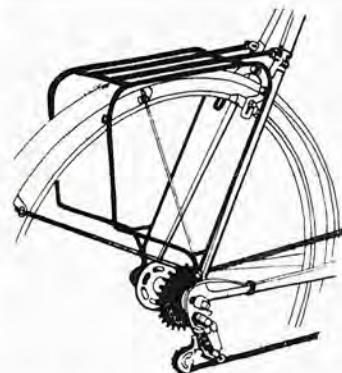
FRONT PANNIER CARRIER

It is very important that the single plate upper fastening is on the main brake bolt but behind the mechanism and in front of the fork crown.

Weight: 460 gm

Construction: Nylon coated steel

Colour: Grey



REAR PANNIER CARRIER

The prime consideration when buying a carrier for your tour is not how it looks or, within reason, how much it weighs, but its rigidity. Pannier carriers which sway under the weight and pedal thrust are commonplace. Ours has been specially designed with a two-clip fastening, and, of course, the usual fastening to each mudguard eyebolt. The mudguard stays are removed and fixed into the upper spare hole.

Weight: 750 gm

Construction: Nylon coated steel

Colour: Grey

karrimor



The Natural Way to Go

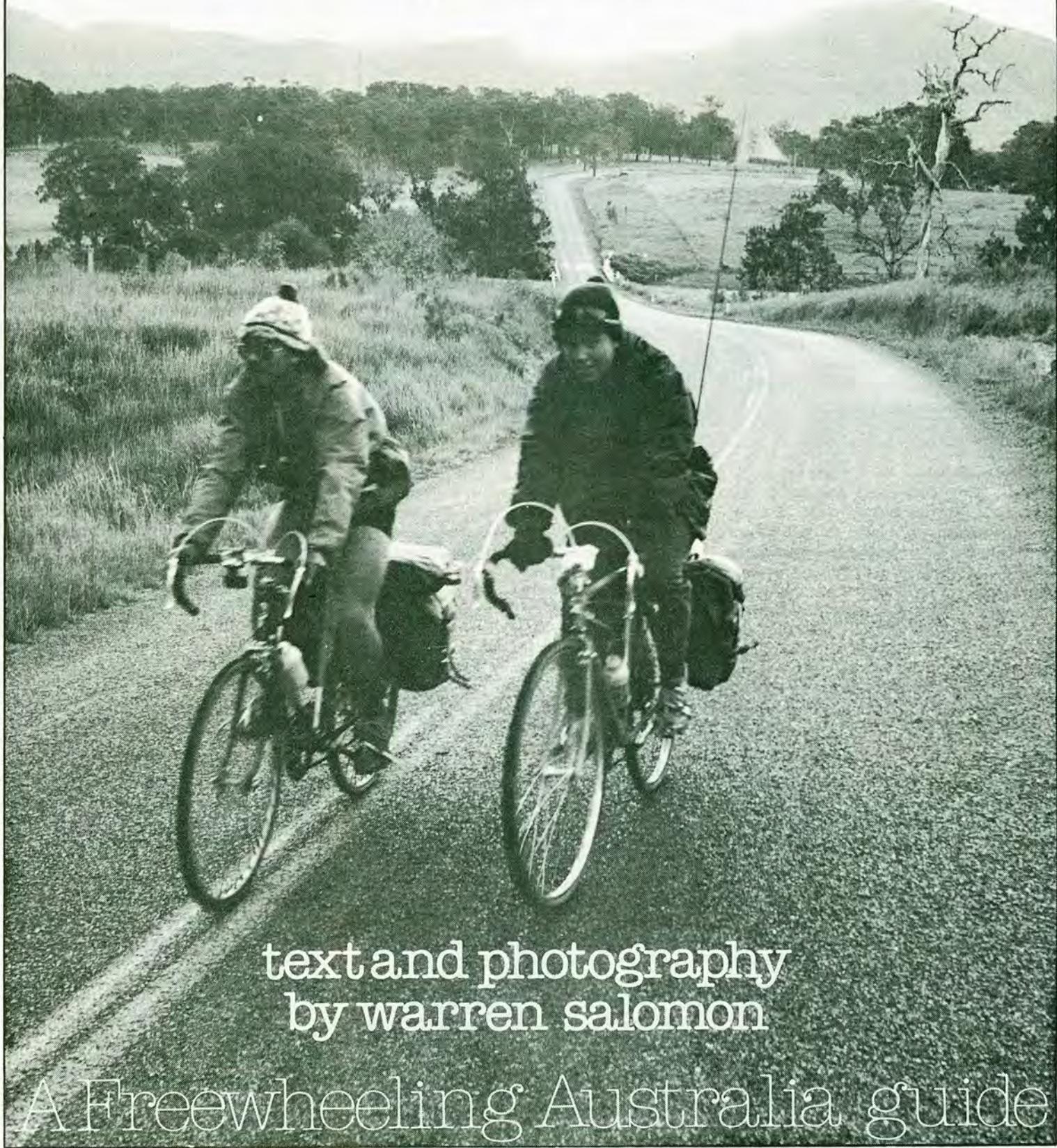
Fresh air. Good company. Healthy outdoor freedom.
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RALEIGH

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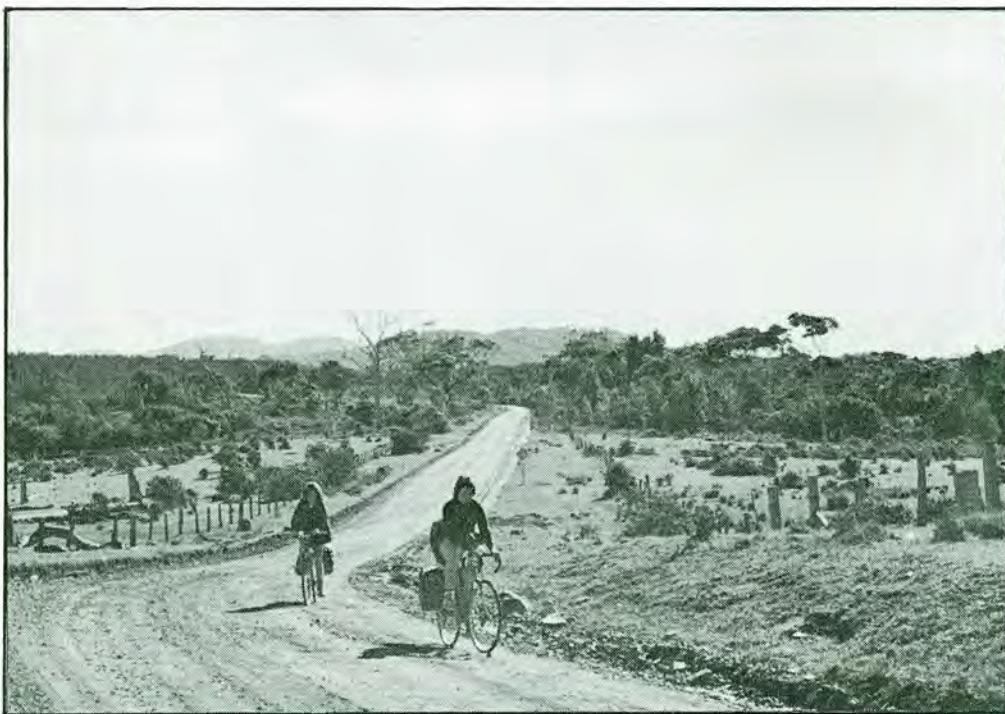
Getting started in Bicycle Touring



text and photography
by warren salomon

A Freewheeling Australia guide

So you want to go bicycle touring



On the road from Crescent Head to Port Macquarie NSW.

Bicycle touring is for anyone who can pedal a bike. Once you are out of the smoky, gritty city and onto a quiet country road you begin to experience what freedom is all about; your head becomes unclogged and your thoughts flow freely as the wind through your hair.

Unlike your motorised counterparts you are more in tune with the natural environment. You become part of the countryside, not alienated from it by glass and steel. A whole new world opens up to you: a world that was there all along just waiting for you to discover it on your bicycle...

You will generally find that the people you meet along the way will be more friendly to you. For one thing country people are like that — used to a slower pace, less suspicious. Take a look at yourself — there's nothing concealed in your method of travel. After all, it is you who pedalled your way out here and all you carry is packed on your machine. It's a very open way to travel. Your home, your bed, your kitchen, it's all with you. There's nothing complicated to conceal.

Because you choose to be more open and more exposed to your environment you will soon learn by experience how to predict changes in the weather. When you are prepared for rain all that remains is for you to enjoy the experience. So, you might climb a 500-metre mountain

range in teeming rain soaked not by the rain but your own sweat, it's all part of the challenge. It's OK really, you do have that warm, dry change of clothes securely wrapped in waterproof plastic somewhere in your pannier bag, and your sleeping bag won't be wet either, your preparations have seen to that.

Like the bushwalker, you are a modern day explorer. What you see and what you find will always be new to you as the beholder. You may not penetrate the untracked wilderness but you will still be able to cover most of this vast continent with greater ease than your pedestrian counterpart — the bicycle gives you a mechanical advantage. Even if you have to push up a steep rocky track you will be able to move your load with greater comfort and efficiency thanks to those little ball bearings.

Most of us who live in the larger cities have become used to noise almost to saturation point. On a bicycle we start to become aware of subtle sounds like the crackle of gravel under tyres or the movement of a small animal frightened at being crept up on by a person on a machine. On a long quiet stretch, a casual conversation moves with the rhythm of rotating pedals and drive chain.

People will vary on the question of pace. While there are those who will push on two hundred or more kilometres in one day there are others who prefer a

steadier slower pace with more distracting stops along the way. Distance travelled is a personal thing. As long as you and your companions enjoy yourselves it doesn't matter how fast or how far you go. Often it's not your choice. Fate and unfavourable conditions will intervene — a breakdown, a stiff headwind, a cold wet snap — above all it's a question of what can be comfortably achieved given the prevailing conditions and your own feelings of wellbeing. It's an opportunity to get to know yourself and your capabilities and learn about the land we know too little about.

You will learn things you didn't expect to, like keeping something in reserve to account for the unknown, the unexpected — how you travel and what you carry is also a matter of personal style. In the early days, outback shearers used to strap their swag onto their machines and pedal the primitive roads in search of work. These days with well-designed pannier bags, you can easily carry enough equipment to set up a very comfortable camp and prepare your own tasty meals over an open fire. Or you can stay along the way at inexpensive country hotels and dine at restaurants and cafes wherever you choose.

In other parts of the world, bicycle touring as a recreational activity is as old and as popular as the bicycle itself. In Britain the Cycle Touring Association celebrated its centenary in 1978 and in Europe bicycle touring is a long-accepted way of life.

In the USA bicycle touring attracts hundreds of thousands of people every year when the weather starts to lose its deep winter chill. In 1976 some 4000 riders rode the first transcontinental bike route from coast to coast.

Here in Australia the future looks very good indeed. With many thousands of kilometres of fine secondary roads at our disposal, people are taking to the roads and rediscovering our vast country. Dedicated groups of people are mapping these roads and guide books are beginning to appear. Even though bicycle touring is something easily done with a few friends whenever the time can be found, many clubs are being formed in the capital cities and large towns throughout the country. These clubs exist to provide support for people involved in bicycle touring as well as to foster a rapidly developing recreation. Listed below you will find the key bicycle touring bodies in each state. These groups will put you in touch with a club in your locality if one exists and will even help you set up a club if you and your friends wish to start one.

As you will soon discover when you get out into the real Australia: bicycles are everywhere. It's a big country and it's yours to explore... happy pedalling.

The Bicycle



There is no such thing as the perfect touring bicycle. All experts will have their own preferences. You will need to tailor your bicycle to the kind of touring you expect to be doing. For example if you wish to dispense with camping out

and prefer to stay in hotels and motels along the way then you will need to carry less equipment and wide range gearing will not be such a necessity. If you plan to carry your house (tent, sleeping bag, and food between towns) your machine

Bicycle touring in the western Tablelands, near Tarana NSW. 1977 Ride against Uranium —



will need to be fitted with a sturdy carrier rack capable of supporting some form of carry bags and gears would be a useful addition.

Below are various items of equipment which will aid your comfort and ease of travel. If you are purchasing a new bike you will find that most of the recommendations are worth consideration; if you already own a bike some will not apply. However, because of the relative cheapness of bicycle components, items such as gear clusters can easily be exchanged in order to improve the usefulness of the bicycle you already possess. If comfort is to be the criteria you may find that you have your own requirements which in time will sort themselves out. Seek out experienced people for advice by all means but remember it is you who ride your bicycle, so in the end you must decide which item of equipment is best for the style of touring you adopt. Only items of equipment relating specifically to aspects of bicycle touring have been dealt with.

Frame

The frame is the skeleton of the bicycle. For carrying heavy loads it is important that it be strong and rigid. Lugged frames are strongest. To test for excessive frame flex grasp seat with one hand and handlebar stem with other hand and feel for side to side flex in frame. Old style ladies' frames are generally unsuitable as the amount of flex from load and rider motion will often result in dangerous instability. A frame angled to give a longer wheelbase will result in a firmer, more stable ride especially when loaded with equipment.

Gearing

Gears are an option which relate more to your style of touring than touring itself. Some people will make do with a single-speed coaster brake bike.

If you travel heavy and prefer the efficiency and comfort of gears than a wide-range ten-speed combination will assist your mobility. A rear freewheel gear cluster of 14-32 teeth or 14-34 teeth coupled with double front chain wheels of 34-50 teeth or 38-52 teeth or 40-52 teeth will give you low gears suitable for pulling a loaded bicycle up long mountain ranges with minimum effort. High gears are useful in obtaining acceleration on down hills to get you up the next rise. A rear wheel cluster of 14-28 teeth will be sufficient for touring without heavy loads. If wide range gears are fitted you will need a long-arm rear derailleur capable of *wrapping up* the extra chain involved.

When purchasing a new bicycle from a reputable cycle specialist ask if the gears of your choice can be fitted before you take delivery. This generally involves little or no extra initial cost.

Wheels, Tyres

Alloy rims are lighter and have more efficient braking capacity than steel. However, because the metal is softer you will need to look after alloy and keep spoke tensions even. Buckled rims can often result from a mixture of bad luck and aggressive riding style as can repeatedly punctured tubes. Careful riding is the secret to maintaining good rims and sound tyres.

New wheels should have the spokes retensioned after a few weeks' riding to take up spoke stretch and thus ensure long wheel life.

Tyres should have a good tread and tubes should be of strong design. Singles (tyres with sewn in tubes which are glued on to rims) are unacceptable for bicycle touring if rough conditions (non-sealed surface) are to be experienced. High pressure tubes and tyres are preferred by some because of decreased rolling resistance on bitumen roads. On unsealed roads, tyres and tubes with lesser pressures are preferred because of their greater grip on the road surface. Somewhere a compromise is needed as there is no one tyre available in 1978 which is suitable for all Australian Touring conditions.

Saddle

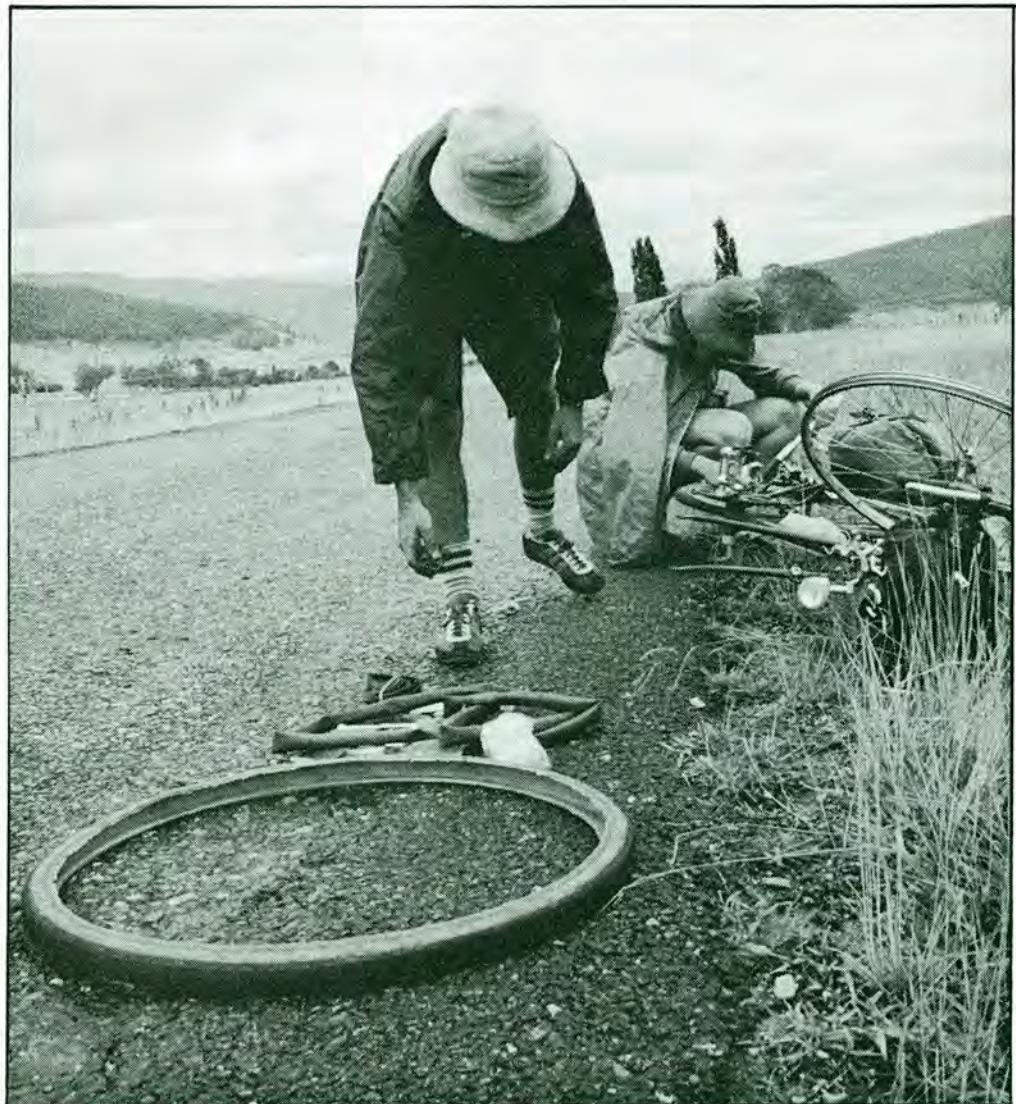
A touring saddle should be wider than the racing type due to the more upright riding position. Women's seats need to be wider still due to broader pelvic anatomy. Choose either nylon shell or leather. It's all a matter of personal comfort. Leather seats will need more care and maintenance. A shower cap kept handy in a pannier bag will protect the seat in the event of rain.

Handle Bars, Brake Levers and Gear Changers

Drop-type or racing-type handle bars are generally preferred because of the greater variety of different hand grip positions available. Bars can be double taped with cloth tape or covered with closed cell foam tubing to give greater hand comfort for long journeys. Brake levers should be fitted with rubber hoods to allow hands to rest comfortably on them, thus providing another hand position. Touring extension brake levers are convenient for some people while others find that they decrease the efficiency of the brake lever system, decrease the amount of sensitivity in brake lever manipulation and get in the way of handlebar bags if fitted. The lower down position of hands on conventional levers provides a lower centre of gravity and greater stability in sudden braking conditions.

Carriers and Racks

Racks should be well constructed of solid metal, preferably steel for greater strength and durability. Alloy racks with tubular



Punctures and general tyre troubles are the most common type of mechanical breakdown. It is necessary to have a few tools and repair kit to cope with these problems. Near Khancoban NSW.

down struts will often break with normal sway motion of a heavy load. With bags attached to rack there should be little or no side to side movement in the rack. Racks should be bolted to frame and if lugs are used there should be no movement in the lug where it clamps to the frame. Brazed on lugs are superior to the bolted on type.

Tools

A basic, personal repair kit should consist of the following:

- Puncture repair kit.
- Tyre levers.
- 15 cm (6") shifter (for removing wheel nuts).
- Screwdriver.
- Spare tube.
- Spare brake cable and derailleuer cable.*
- Spare spokes (taped to frame).*
- Pump.

*Optional item.

These tools will suffice for most types of common breakdown, eg flat tyre. More comprehensive tool kits for larger groups are referred to in an article 'Tools for Travelling', *Freewheeling Australia* issue 1/1978.

A quick way of dealing with the problem of a flat tyre is to simply replace the tube with the spare. The puncture can be repaired when more time is available at the end of a day, patch made and allowed to set while the tube is deflated.

Pump

The most inefficient kind of pumps are ones which have screw on extension hoses. There is always air leakage from the connections. A pump which fits directly onto the valve stem will eliminate leakage and improve pumping efficiency. This kind of pump is necessary to obtain the very high pressures required for HP tubes.

Water Bottles

One or two water bottles in cages fixed to frame are a necessity in a dry country such as ours. Cycling as an activity involves considerable moisture loss so it is important that it be replaced. As it is often inconvenient to stop every time one feels thirsty the more water carried on the bike the better.

What equipment to take

Carrying the Load

If you are beginning in bicycle touring then the equipment list on this page will give you a guide to basics. As you gain experience you will make your own modifications to suit your touring style. The list is primarily intended to assist camping cyclists. Obviously if you aren't camping most of the items listed will not be needed. A small day pack bag will carry your few personal items and snack food.

Equipment is best carried in strong pannier bags strapped or firmly fixed to sturdy carrier racks. A pannier is any bag which fits to a bicycle in order to transport equipment. It is important to keep your load as low down as possible as a low centre of gravity aids stability.

There are a few good manufactured bags available and these generally involve some expense. A simple and cheap solution is to purchase two army webbing type haversacks and strap them to your carrier so that they hang down over the wheel. You will also need to secure the bags at the bottom to prevent flapping about. This can be done simply by using an octopus strap clipped around the bag off the carrier strut.

It is often an advantage to have a light piece of plywood as a stiffener in each pannier. This will prevent bags from going into the spokes if badly packed. Such board will double up as cutting boards in preparing camp dinners.

Most bags, even manufactured ones,

aren't waterproof. Leaking generally occurs at seams where moisture is forced through by wind. A proofing compound can be applied to canvas and cotton webbing which will keep most moisture out, but for important equipment such as sleeping bag and clothing it is safest to seal them in plastic bags inside the panniers.

Gear which won't fit into pannier bags you will need to wrap securely in plastic or other waterproof material and fasten to top of the rack with octopus straps.

Notes on Equipment List

It is useful to carry extra warm clothing as often cold weather is unexpected. Wool is the only fabric which keeps you warm when wet. Long pants are seldom worn when pedalling but are needed at night in camp. A track suit will suffice in place of jumper and long pants for summer climate. It is good to change into warm, dry clothing at the end of a wet day. Clothing which buttons or zips up the front is superior to pullover type jerseys and jumpers as it allows ventilation when riding. A bright parka or pin-on reflective patch will aid visibility if caught out by darkness. Parkas should **breathe**, (allow moisture generated by a sweating body to escape and not condense on the inside of fabric).

Group equipment is best shared on a weight basis among individuals so that everyone can contribute equally.

Pannier bags can be improvised, home made or manufactured. The bags on the right are home made, those in the centre are improvised army haversacks and the bike in behind has manufactured panniers fitted. The legs in the foreground are those of a tired bicyclist. Atherton Tableland Q.



Basic personal gear list

Clothing

- hard soled shoes;
- socks;
- underwear;
- shorts;
- long pants;
- handkerchief;
- woollen jumper;
- shirt(s);
- waterproof jacket/parka;
- hat, helmet or beanie;
- gloves or mittens;
- wet weather extras: over pants,
- waterproof overshoes;

Personal Items

- small towel;
- toilet paper;
- toothbrush;
- sunglasses (O);
- water bottles (on bike);
- money or bank book;
- personal tool kit;
- personal first aid kit.

Camping Equipment

- sleeping bag;
- closed cell foam sleeping mat (O);
- inner sheet (O);
- mug;
- bowl or plate;
- eating utensils including sharp knife;
- matches in waterproof container (or greenlites);
- plastic bags to keep clothes dry;
- Cloth drawstring bags to contain small, loose items.

Group or Shared Equipment

- tent plus poles and pegs;
- ground sheet;
- billies (aluminium, 1 per 2 persons);
- torch (1 per 2 persons);
- scouring pad;
- group tool kit (refer *Freewheeling Australia*, issue no 1);
- group first aid kit (refer *Freewheeling Australia*, issue no 2);
- soap;
- maps;
- 5 litre canvas water bucket;
- plywood cutting board (O);
- food.

(O) denotes optional item.

On the road

Where to Go

The only roads in Australia which are unsuitable for bicycle touring are the main trunk highways and even some of these are acceptable if there is adequate width of sealed roadway. For long distance touring there are generally alternative routes to main highways which usually offer scenic attractions as an added bonus. If you are starting off touring it is best to begin with short one-day rides around your locality and go further afield as you gain confidence. For most who live in the large cities it will be necessary to get you and your bike out of the metropolitan area and away from heavy traffic before you begin your trips. This can easily be done by using the railway or putting your bike on a roof rack or other bicycle carrying car rack, and driving out into the country to your starting point.

National parks and scenic areas are good to visit on your bike. Most have well maintained camp sites adjacent. The best seasons for bicycle touring are late winter through spring to early summer and later summer through autumn to early winter. Mid summer in most areas is very hot and the roads are clogged with holiday traffic — however if you look hard enough you will find some areas will be satisfactory. Winter is a good time to head for northern climates.

Regional touring is a good approach. Simply pick a region which interests you and try to find out a lot about the area before you set off. Tourist bureaus can help with lists of things to see, places to camp and accommodation details. Plan your trips but adopt a flexible attitude especially with regard to distance at least until you can assess your capabilities. Also you never know what may distract you along the way.

Maps

A good way of finding suitable touring areas without having direct experience is to scan maps. Most petrol company maps, though car travel-oriented, give reasonable road details including surface type. These maps in conjunction with a large-scale topographical map will often be all that is needed. Some topographical maps are contoured which will give you an idea of hills and scenic wonders to be encountered. These maps are available from most state lands departments and Natmap agents throughout Australia. The scale most suitable for bicycle touring is 1:250 000. Forestry departments too have useful maps available for sale.

Local Information

Asking local residents for directions is often a way of finding out things and



Upper Barron Road, Atherton Tableland Q.



Road Map

places you otherwise would not know about. This particularly applies to camp sites. Always seek out the land owner for permission before camping. This way you won't be chased away after your camp site is established and, if you respect the land you will always be welcomed back next time.

On the Road at Last

Take it easy starting off. On longer trips you will probably spend the first day tuning up. Your bicycle will need fine adjustments and you too will need to ease into the rhythm of the pedals. An easy first day will also give your muscles a chance to adjust.

If you ease into your journey you will find that you will be much more capable of steady and sustained progress.

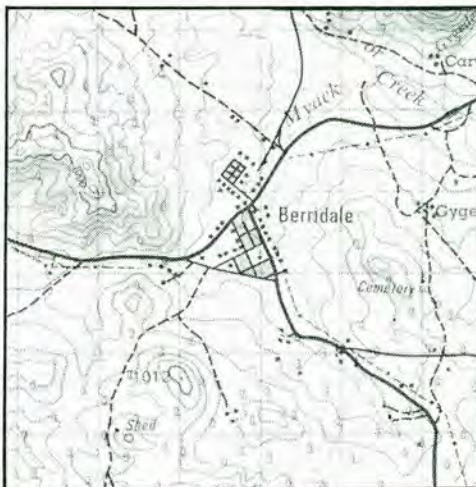
Experiment with your gears on long flat stretches until you get the hang of changing. When approaching long hills anticipate your gear changes and aim for a smooth change down.

Food

The good thing about travelling on bicycle wheels is that you don't have to worry too much about weight. Only space is the problem. This means that you can carry more fresh food and eat well too. Buying as you go also helps local economies and generally means you can even deal directly with the growers.

Unfortunately you will notice that a lot of the food you buy still travels long distances and the ubiquitous supermarket is hard to resist.

As to the food you eat you will find some items like sugar are only purchased in a set quantity and so you will have to carry a stock of these. Plastic clip or screw top containers are good for dry items. Plastic refillable squeeze tubes are great for carrying honey, jam and even butter (when it's warmer). Otherwise plastic bags are ideal for making sure that the food you carry doesn't get spread throughout your pannier bags.



1:100 000 Topographical Map

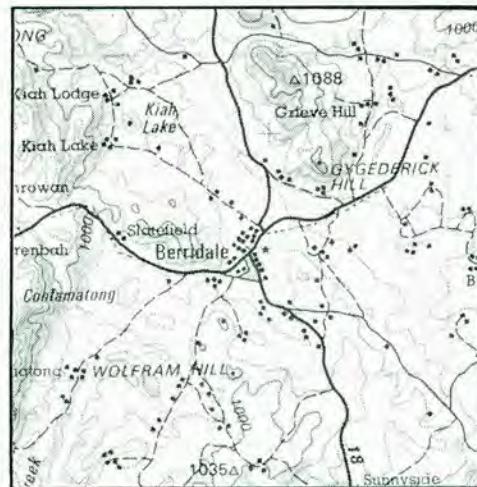
What to eat? Light breakfasts are the best for the stomach and also for getting away to an early start before the heat of the day — in the summer heat it is good to have a fresh healthy lunch and rest up until the heat goes out of the day before pedalling on — by dinner time you will find that you have quite an appetite.

Fresh fruit, especially oranges, are good to keep at the top of your bags to munch on as your day goes on. Some people prefer to eat light throughout the day rather than having set meals.

To add flavour to evening meals you could pack a small container of your favourite herb or spice. Plastic film containers are ideal.

Camping

If you are camping out and looking for natural camp sites begin your search early: As suggested it is best to ask the land owner and this often requires time. If you are caught out by darkness and are forced to camp near the road you are



1:250 000 Topographical Map

travelling, look for a road bridge to camp under or get well off the road. It is best to be out of sight of motor traffic. Cyclists, perhaps because of their apparent vulnerability, have sometimes been the victims of attacks and harassment in places close to roads such as rest areas and picnic spots. If you are in such a position be sure to at least get the attackers car number plate so that the police can follow up the complaint you make. This also applies to on-road harassment.

Water

Australia is mostly an arid country. In some areas water is a scarce commodity. It is generally a simple matter to fill water bottles in towns but when out on country roads sometimes a water supply is hard to find. If you ask for water at farm houses and homesteads be considerate. Tank water is precious to country people. Creeks and rivers in lower reaches are generally polluted, especially if they are still or sluggish. At

Campsite near Beaudesert Q.



a lunch stop water can be boiled if you are unsure of its quality. Generally creeks in their head waters are good if they are flowing and there is no human habitation. Be cautious, drink only water you are certain of.

Fire

In most areas of southern and western Australia there are fire bans in force during the warmer months. Check if there are any fire bans affecting the area you plan to tour in before setting off. Where constructed fireplaces are provided in camping areas it is generally OK to light a cooking fire as long as it is always attended and there is not a total fire ban in force. Never cut down live trees to obtain wood for fire. There will always be fallen wood around where there are trees.

Lunch stop in Paterson NSW

Camping Standards

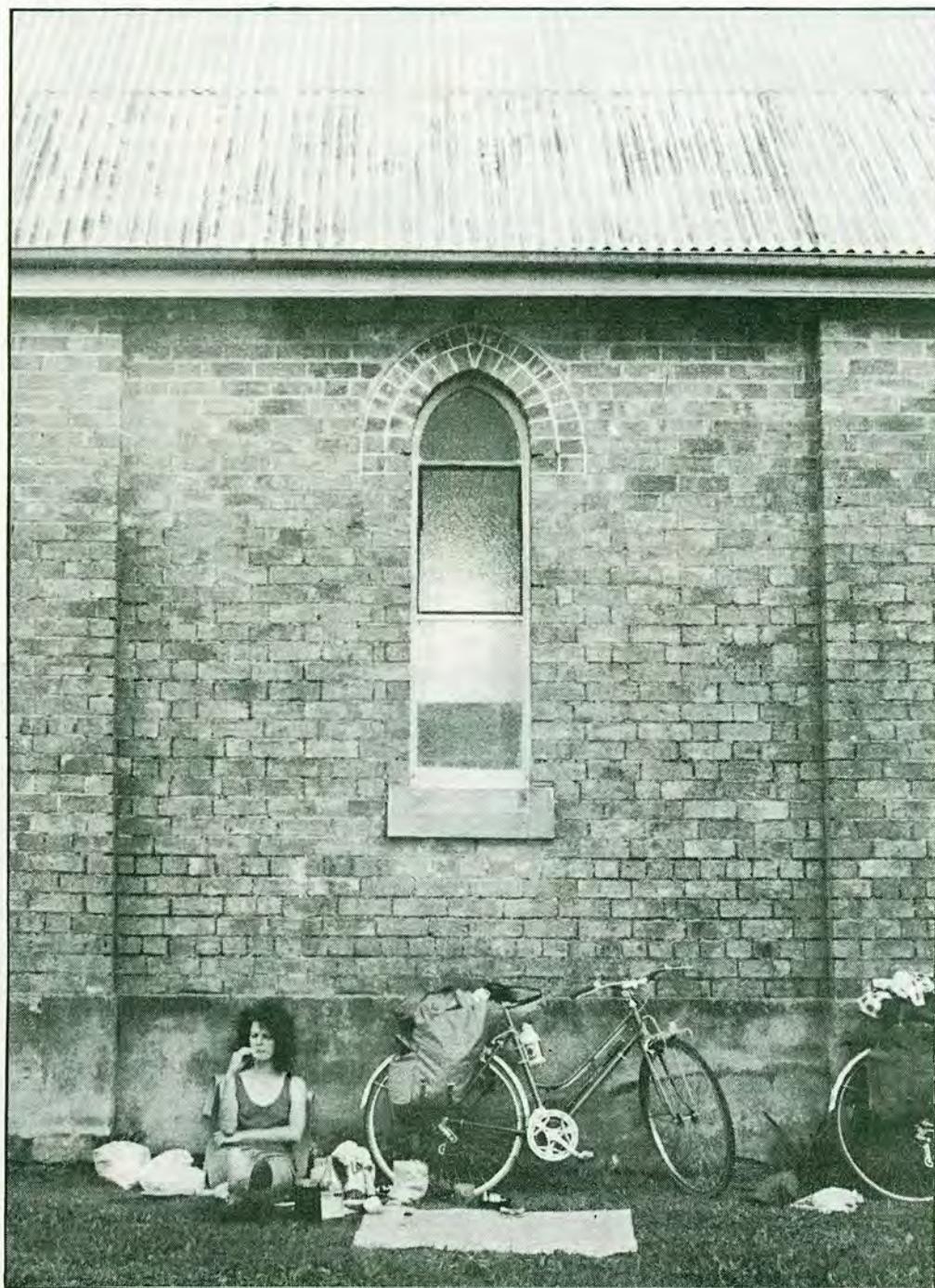
It is important to remember that we are not alone. If we camp in an area we will always find traces of other users of that area — the fewer traces we leave the better for those who follow in our footsteps. Water courses become polluted by thoughtless people used to the concept of flushing water when disposing of human excrement. If you use a camp site which has no toilet facilities always **bury** your excrement well away from the creek and water courses. Only care will prevent what remains unspoilt of our natural environment from going the way of the unthinking world.

Fires should always be properly extinguished when finished with and you should clean up any litter you have made.

Garbage such as paper and wrappers should be burned and non-degradables such as bottles and tins should carefully be wrapped and taken with you and disposed of thoughtfully on your return home. When cycling along country roads it is easy to see the consumer/disposable society at work. Cans and packaging are everywhere. Most of this is discarded from speeding motor vehicles and is evidence of the alienation produced by that mode of transport. Hopefully bicycle touring engenders a different attitude to our environment — after all when you bike it you are part of it.

Recycle Australia.

This *Freewheeling Australia Guide* was prepared by Warren Salomon. Additional copies are available from the publisher: Freewheeling Australia Publications P.O. Box 57 Broadway, NSW 2007.



bicycle touring contacts

NSW

Bicycle Institute of NSW
Bicycle Touring Group
399 Pitt Street, Sydney 2000

Victoria

Bicycle Institute of Victoria
Bicycle Touring Committee
PO Box 1961R,
GPO Melbourne 3001

Tasmania

Pedal Power Tasmania
102 Bathurst Street, Hobart 7000

ACT

Pedal Power ACT
PO Box E305, Canberra 2600

SA

Cyclists Protection Association of SA Inc
PO Box 132, St Agnes 5097

WA

Cycle Touring Association of WA
31 Bruton Street, Balcatta 6021

Queensland

Easy Riders Bicycle Club
c/o 187 Kelvin Grove Road,
Kelvin Grove 4059

another bicycle place

by Yabbo Thompson

In India, only a small elite can afford to own a car or motor bike. Most travel is done by public transport, bullock carts, tractors, camels (in the desert state of Rajasthan), bicycles or of course, on foot! The bicycle is one of the best ways of travelling especially locally, ie around cities and surrounding villages.

You often find whole families astride just one of the vehicles; for instance, one child on the handlebars, one on the bar in front of the seat (sometimes a small seat is affixed for this purpose) and another adult seated behind the rider holding one or two children.

These machines are heavy-framed upright models, with a straight or V-shaped frame. They often need repair owing in part to the rough terrain and the fact that they are not overhauled in the same way as here. However, India, being a country of spare parts, the bicycle can usually be repaired!

These vehicles are also used as taxis, namely three-wheelers attached to a carriage, room enough for three or more people. (I have seen eight at one time!) Although these 'taxis' are only found in flatter areas, you can only marvel at the calf muscles of these taxi-drivers, as well as feeling pangs of guilt if circumstances prevail that you must ride in one to reach a destination. There is no set fare rate and it is best to bargain at the beginning of the journey (if you know the distance!) to avoid arguments at the end. Foreigners are charged more unless they are with local people or speak the local language. On average, you pay about one rupee (10 cents) for up to three kilometres.

It is very easy to hire a bicycle all over India. In northern India, the price at the moment is one rupee fifty paisa a day (approximately 16 cents) or thirty paisa an

hour (approximately 3 cents). It is best to ensure there is a lock but a pump is not necessary. If flat tyres or punctures occur (which is frequently) there are cycle shops almost every few yards within city areas, in most villages and sometimes between places. Frequently things go wrong, a pedal or chain falls off or a tyre blows up but you can usually be in the near vicinity of a cycle repair shop.

It can be difficult riding between or within cities as there is not such a clearly defined highway code. Driving is on the left side, but you can find vehicles (be they cycles, bullock carts, trucks, scooters, cars, buses, cows or people) approaching you on the same side of the road. Then the skill is in being able to manoeuvre past causing the least disturbance to other road users. Falling under bullock carts is all right as long as you don't scare the bullock!

Young males often gather together on cycles and are apt to ride along in friendly fashion holding hands, oblivious to other road users. All you can hope for is enough space at the edge of the road in which to pass; or for the more assertive, to close your eyes and pedal straight through the middle of their ranks!

There are no lights for cycles, which makes riding along unlit country lanes on dark nights an exciting experience. Just be careful of ditches!

Accidents may be more frequent but are usually not as serious, simply because there are more cyclists than anyone else on the road and somehow there appears more time to move from one place to another.

This article was based on experience in Rajasthan, particularly Udaipur and surrounding areas.



In which three of us make a find

Touring the NSW Goldfields

by Janet Scrivener

If six lost gears, one ripped mudguard, one broken brake cable and one bent wheel rim doesn't sound deterring enough, throw in four punctures and one near squashed cyclist and there you have what nearly turned last Easter's Hill End ride into a 199 km disaster.

In fact, Charlie Vassel, Denis Golding and myself, especially, might have thrown in cycle touring altogether had we not had nature's tonic to revive flagging spirits and make each pedal push that much less gruelling.

And what sweet cures are offered for the taking between the hamlets (?) of Capertee and Hill End?

No specific details were publicised on this four-day tour around the NSW goldfields: a tactic to avoid hoards of unannounced latecomers, which duly did the trick — we numbered three. As impressive as we tried to look, we couldn't help feeling a little overawed by some three dozen hefty boy scouts — our fellow passengers on the Mudgee Mail.

Perhaps not for those who patronise such establishments as the Menzies or the Wentworth, our first night's lodgings suited us nevertheless, down to the ground, literally; who could complain? A raintight roof above, Victoriana floorboards below, wall to wall water closets, not to mention that foreboding *Ladies* suspended outside my compartment to ward off any malignant lurkers.

From Capertee railway platform, we aimed north. Razorback Road, an obscure turnoff to the left at Cherry Tree on the Mudgee Road, merits every metre of the nasty highway stretch to get there. We all agreed, its combination of gentle twists, undulations, breathtaking valley views and tranquil pastoral scenes makes for the ideal country road. One warning: don't let panoramas distract from some of the more testing gravel sections — a cyclist on the road is worth two in the gorge.

We tasted our first sample of the dreaded inland floods in what we met at the bottom of Razorback. Past herds of sour-faced motorists stranded on the banks belched the angry Turon, while we (with all due respect to the mighty waterway) perched bikes on our shoulders, and in Moses fashion, tiptoed over (?) the torrents to the other side.

Oh! what gushes of diplomatic pride surged in our hearts; with what ease we put the motor vehicle in its place. Yet another triumph for the cause.

Nearby Sofala, a scattering of pioneer cottages nestled between hills and water, must be one of Australia's most enchanting little towns. Its centre is a main street running parallel to the river, where a cluster of dusty old shops offer goods which, although they look very turn-of-the-century, taste as fresh as day.

If stomachs crave for more than a hunk of rustic bread and cheese, you'll find one of NSW's most interesting restaurants in Flatt's Cafe, a mere fifty metres away. No doubt the patron, mighty Bob Flatt, heaved a sigh of relief as we bikies arrived pushing no more than pedals. As he'll recount to you, with enough relish to captivate every ear in the room, other bike clients of the past have utterly laid siege to the modest cafe brandishing crosses and chains and scattering the locals like mice. Yet, with such drama comfortably in the past, I'm sure for Bob Flatt that this is the spice that makes life.

The 35 km on to Hill End is deceptively long. Just zig-zagging around stones must add another few. (Denis didn't zig-zag quite enough at one stage: puncture number 2.)

Anyone who thinks that they're OK on wheels, try Monkey Hill halfway along for size. Even if your leg muscles and bike are capable of the climb, the loose dirt and random scattering of rocks will guarantee your crossing will be difficult if not ambulatory.

I'm convinced all cyclists have in them traces of the masochist — why else would Denis and I refuse a lift to the top from a well-meaning publican who *did* promise us those free beers we never saw.

Fauna in the area is scarce although one sign announcing *Bunyip Crossing* suggests there are more than wombats behind those bushes.

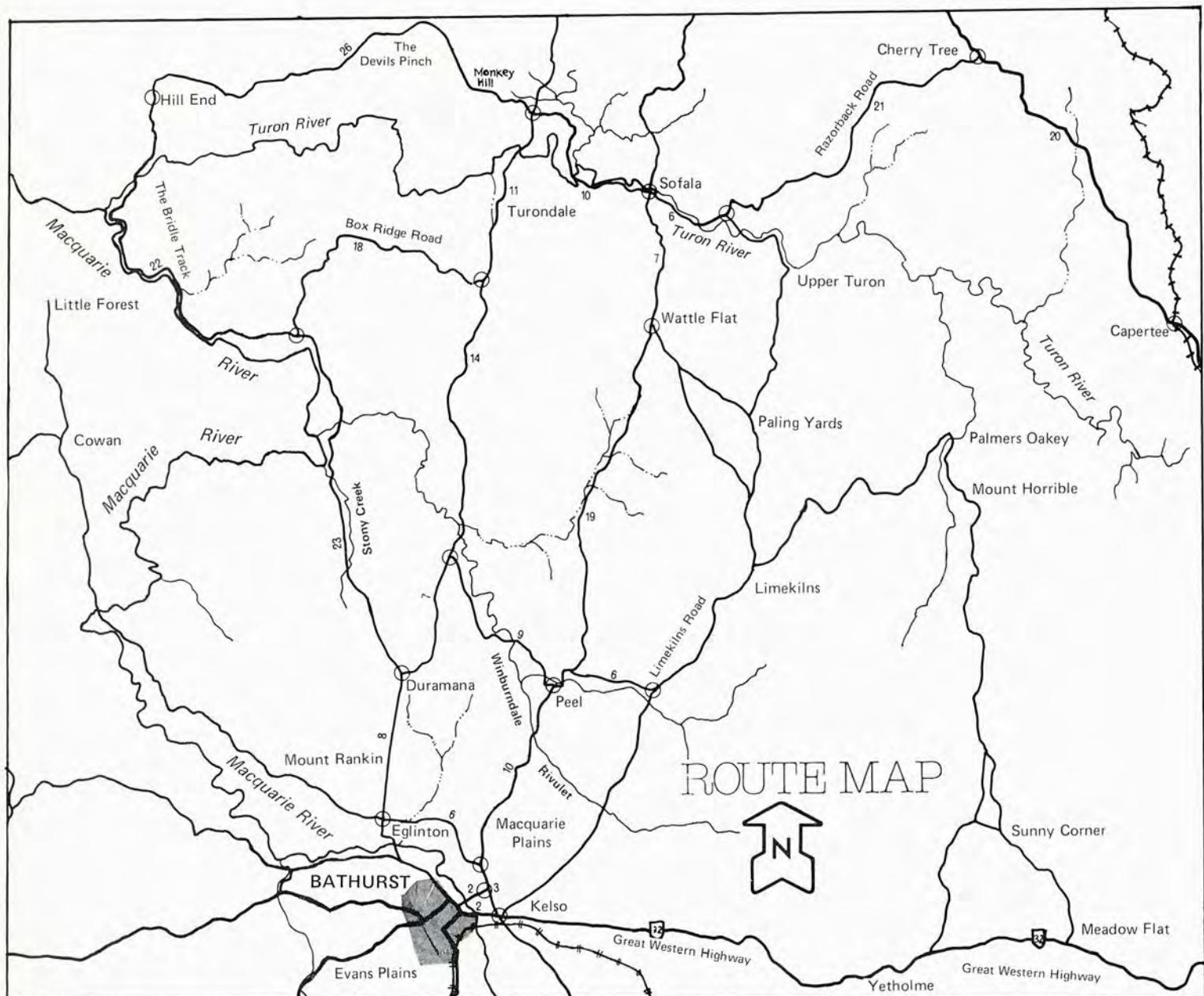
The treasures of the inland seem to increase the further west you get. Although Sofala has its earthy charm, Hill End is the jewel of the goldfields, dotted with many stone and timber shanties behind whose shuttered windows rests a century's history. Visit the craft shop and museum, a two-hour walking tour is also offered. To really appreciate the town, its disused mine shafts and lookouts, however, a whole day is needed. Camping sites abound close to the town centre and surrounding grassy hillocks, although after only eight more kilometres via the tortuous Bridle Trail (which requires more than one brake as I discovered) we stumbled across a veritable fairy glen lapped by the Turon — far gentler here. With the sweetly perfumed pines and chortling water slipping by, all was bliss except for the mud. Charlie did three lovely sixers (just as Denis and I were becoming rather concerned that nothing had yet happened to our agile leader).

With Sunday came another chance to vent our cycling talents; (??) this time crossing the waist-high water (slight exaggeration there) without turning a hair, we felt like something out of Barnum and Bailey.

The Bridle Trail, which for several winding kilometres follows the majestic Macquarie River, offers scenery to rival that of Razorback. Riddled with ditches and sharp stones, however, it is best to ride slowly; a lazy autumn Sunday would be perfect, when the air is crisp and the sun just warm enough to merit a swim in the river.



Above: Typical dirt road in Capertee area.
Right: Crossing the flooded Turon River upstream from Sofala. All photographs by the author.



LEISURE BIKES

FOR TOURING BAGS AND PANIERS



Bellwether, Cannondale, Eclipse, Kangaroo and Karrimor. Send stamped self addressed envelope for detailed list.

Touring accessories and parts including carriers (front and rear), handlebar bag support frames, helmets, nylon rain capes, saddles, gears, cyclo tourist triple chainwheel sets, etc.

LEISURE BIKES

579 BURWOOD RD.,
HAWTHORN, VIC., 3122.
PHONE 818 7241

Canoeists provide a hazard; I'm sure they, as well as those acid currents would make for an interesting dip.

The road surface is so rocky and corrugated that it never ceased to rattle and jar the bikes; after every jolt you listen for the hiss of a split tube — which in these conditions doesn't take much waiting for.

Duramana is not so much a place as an area; the actual dot on the map is merely

a fork in the road. Fortunately we could count on Denis' Edam, Charlie's Promite and my muesli (the muse) to ebb off hunger until we reached Peel.

The road from Duramana turnoff to Peel: swift sweeps of descending tar, is antidote for any previous climb. It led to our final campsite by the bridge over the Winburndale Rivulet from where, on Monday, we rode to Bathurst.

notes

Some cautioning words: to be read in advance

- Footbridges or road bridges with parallel boards should be negotiated at slow speeds and with extreme caution. The small footbridge in Sofala is worth all risks for the excellent cyclists' campsite on the other side.
- On wild apple eating: Charlie consumed one particularly venomous looking specimen. No side effects yet but we're waiting ...

Possible benefits to be reaped from such an outing

- You may lower your pulse rate.

Recommended contacts with civilisation

Name	Place
Running Stream	Running Stream
Roadhouse —	between Capertee and Ilford
noted for its delicious Black Forest Cake	
Flatt's Cafe	Sofala
Patrons: Bob and Marianne Flatt	
French/English cuisine	
★ hearty breakfasts	
★ floor show guaranteed	
Royal Hotel	Sofala
Offers good bed and breakfast.	
Post Office	Sallys Flat
Useful to know of.	
General Store	Hill End
Stock up here when going on.	
Royal Hotel	Hill End
(Last remaining pub of 52) — unanimously popular.	

Pedestrian bridge leading to excellent campsite across the river in Sofala.



A Letter to subscribers

We are poor but we are honest.

If you are one of the many people who have subscribed to *Freewheeling Australia* and wondered why you haven't received an acknowledgement or why the back issues you ordered are slow in arriving, then we think you deserve some explanation.

Firstly *Freewheeling Australia* Publications is not a multi million dollar publishing corporation with huge cash backing necessary to flood the country's book shelves and TV screens with evidence and news of this great new publication. The economics of magazine publishing relate to scale and size of production plus blanket promotion and advertising to let people know the magazine exists. It is generally accepted that any new magazine takes a while before it starts to return its initial investment. We are happy (lucky) to break even and cover costs until the fourth issue when we expect to be of a sufficient size and have enough sales to pass that break even point. Even then the labour, effort and money used to produce issues 1 to 4 may never be recovered. So you can see just how important our subscribers are to us. Firstly you pay us in advance which means that we can use your money to keep the magazine growing and secondly by dealing direct with us we can use more of the money you pay for your mag.

These days distribution is very expensive, especially by post. We have to rely on bulk registered postage to get your magazines to you. The disadvantage in this is that we have to have a minimum of 50 articles to meet APO requirements. At present the demand for back issues is such that orders can be mailed out only once between issue publication mailouts. With increased demand it is hoped to do more regular mail outs.

We regret not being able to send acknowledgements for orders as this costs extra money also. The cover price of the magazine does not include these extras as some magazines' prices do. We want to continue to keep the price of *Freewheeling Australia* as low as possible. It is now some 10 months since we produced our first issue. Prices are still rising but we have managed to keep ours stable. We hope we can continue to keep going in our present direction. If we do, then you can be certain that it's because of you, our subscriber's support.

Thank you very much,



Warren Salomon
Publisher

Recycle Australia!

BICYCLISTS ACCOMMODATION LIST

This list is circulated free to all who wish to be on it. It offers accommodation to travelling cyclists anywhere in Australia. The way this list works is simple: If you wish to recycle a part of Australia that you own and/or care for, like an old shed, a visitor's room in your house, a spot down by the creek or just outside in the backyard, and you would be happy for travelling cyclists to use it for overnight camping then write to the address below and ask to be put on the list. You will receive a current copy of the list with your name and address or directions to your place added to the bottom. Periodically the lists are updated and reprinted and you will receive these copies as well.

It may seem like a bit of a chain letter thing, but the list works the way it does because some involvement is necessary. People already on the list are travelling cyclists offering accommodation or a place to camp at their city homes or somewhere on rural properties. Some are also people who don't travel by bicycle but are happy to let cyclists camp or seek shelter.

The basic requirement for any self-sufficient cyclist or group should be a water supply, somewhere to cook a meal, a place to sleep or put up a tent. The *Bicyclist* seeks to provide for these essential needs in a voluntary way.

The distribution of the list is only to those on the list as some commitment to making the list idea work is necessary.

An advice sheet which accompanies the list explains the philosophy behind bicycle travel and how to make the most out of the list idea.

RECYCLE AUSTRALIA !

RECYCLE AUSTRALIA !

Bicyclist
PO Box 57
Broadway NSW 2007

This list is assembled and printed as a public service by *Freewheeling Australia Publications*, also of the above address.

GEARS FOR BICYCLING

by Russell Moore

MANY beginning cyclists find the derailleur gear mechanism most confusing, yet experienced cyclists find it most interesting.

The derailleur is used on many modern bicycles and with one, two or three front chainwheels and a rear freewheel of four, five or six sprockets, gives from four to eighteen speeds (and you thought your ten-speed was the ultimate).

Before looking at the advantages of one set of gears over another, we must look at gear inches. This is a method of measuring gear ratios which dates from the days of the penny farthing. The gear ratio of these machines was directly related to the diameter of the front wheel. To get a higher gear, a higher (larger diameter) wheel was needed. This brought a greater circumference and thus for one turn of the pedals (and therefore the wheel) there was a correspondingly greater distance travelled.

The diameter of most front wheels was about 60 inches because it was limited by the rider's leg length.

When the safety bicycle (fore-runner of today's bicycle) was invented, its riders wanted a basis on which to compare gearing and the concept of gear inches was retained. The formula for this is:

Dia of wheel in inches \times No of teeth on chain wheel = gear inches
No. of teeth on back sprocket.

Thus a 27 inch wheel, a 52 tooth chainwheel and a 14 tooth free-wheel sprocket would be

$$\frac{27 \times 52}{14} = 100 \text{ inches.}$$

Another term used in comparing gears, particularly by Europeans or those who ride European bicycles, is 'development'.

This refers to the distance travelled for one turn of the pedals. In effect it is the gear inches with π taken into account. From your schooling you should remember that the circumference of a circle is π times the diameter. Thus

development is the number of teeth on the chainwheel times 27 times π ($\frac{22}{7}$) divided by the number of teeth on the back wheel. So the development of our earlier set-up is $\frac{52 \times 27 \times 22}{14 \times 7}$ or about 315 inches. More commonly, development is expressed in metric terms and this works out at about 8.1 metres.

Using Gears to Advantage

To put the gear inches to work we will take a particular stretch of road, and ride three different types of bicycles along it.

The road we will use will be approximately 15 km in length, the first 5 km is fairly flat, we then have a steep climb of 2 km, a steep descent of 2 km, and 6 km of 'roller coaster' type terrain.

Our three bicycles will be a true racing bike, a commuting bike, and a touring

bike. The 'racer' is an all-out speed machine, its frame and equipment is kept as light as possible. The commuting bike is the average '10 speed' sold in many bicycle shops, it is in no way a 'racer', as most of its parts are solidly built to withstand years of hard riding, often in the hands of inexperienced riders. The touring bike is set up for long distance touring, often with loads of 14 kg. or more, although more often than not, it will double as a weekend 'club' bike or commuter.

The gearing of the three bikes varies greatly, as can be seen:

Don't let the maze of numbers confuse you, as the racing bike only uses 10 of its 12 speeds, the commuter 8, and the tourer 11.

We will now take the three bikes along our test course.



1 Racing bike, 12 speed

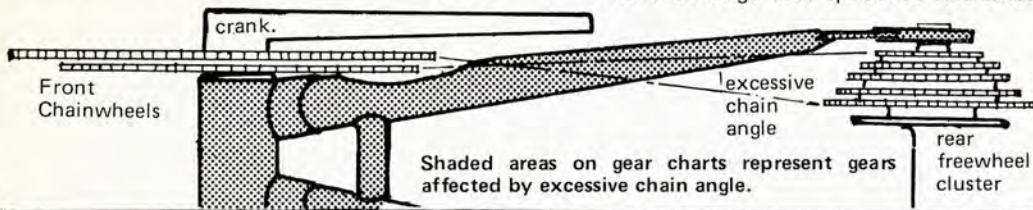
Sprocket						
	13	14	15	16	17	18
55	114	106	99	92	87	82
42	87	81	76	71	67	63

1 The Racer

Most of the time, the racing bike would be in a group of other bicycles, thus increasing the overall speed of the bike, because of the effect of pacing (or drafting, slipstreaming etc). Along the flat section we would be using our 87" or 92" gear, or even higher if we had a tailwind. As we hit the steep climb we would be back down to 71", 67", and 63", our lowest gear. As we reach the top, and start our descent, no one wants anyone else to take a brake on us, so it's not long before we are in 114", and pedalling hard, at speeds of 70 km/h or more. Along the roller coaster hills we would be moving between our 87" and 106" gear. Speed is all-consuming for the racer, nothing else matters!



chain angle



Though it is possible to obtain all 10 gear ratios on a ten speed bike, it is undesirable to run the chain on large front to large rear sprocket and small

front to small rear sprocket combinations. These gears obtain the maximum cross chain angle and cause heavy wear on the chain and sprocket teeth. This problem is magnified on a triple chain wheel set when the amount of chain angle is often so great that the 'crossed' gears are actually physically unusable because of lack of front derailleur clearance.

2 The Commuter

The rider of this machine would not have the fitness level of the racing cyclist, and is not going all out for speed, but prefers a more leisurely pace, so as to take in the scenery. Along the flat section we would be using our 61" or 74" gear, up the climb we would be down to 47" or 38". On the descent we would be using our top gear of 100", but not in as great a haste as the racer. Along the roller coaster section we would be moving between our 88" and 61" gear.

2 'Commuting' Bike, 10 speed

Sprocket						
	-	14	16	19	23	28
52	-	100	88	74	61	50
40	-	77	67	67	47	38

Commuter Bike



Touring Bike



3 Touring Bike, 18 speed

Sprocket						
	13	14	16	19	22	26
52	108	100	88	74	64	54
38	79	73	64	54	47	39
26	54	50	44	37	32	27



Before we ride this bicycle on our 'course', I must point out that this is how my bicycle is geared, but there are many other combinations of gears used on touring bikes with success, so please keep this in mind.

Along the flat section, with the bike loaded for a camping trip, we would be using our 64"-73" gears. On the climb, our load of equipment really starts to take effect, and by the time we reach the top, our gears of 32" and 27" will be taking

quite a pounding. The run down the other side becomes a 'hair raiser', as the load pushes the bike along like a rocket. We would be in our 108" gear, pedalling when necessary. On the 'roller coaster' hills, the load helps on the downhills, but works against us on the uphills, so we would be using our 54" to 100" gears.

I'm sure some cyclists would disagree with much of what I have stated, but as a rough guide, it helps to make all the 'numbers' fall into place.

Make your own wheel trueing jig

by Chas Coin

Cyclists who have ever had a wheel respoked, or just trued, commercially, will know that it is not cheap. Every cyclist should know how to spoke and true wheels as both tasks are relatively straightforward given the right tools.

Along with the humble spoke key, the wheel trueing jig is a simple but indispensable tool for doing the job of wheel trueing properly. The average cost for building up a pair of these jigs (one for the back and one for the front wheels) is approximately \$2.00! Here is how it is done.

Firstly go to your friendly neighbourhood bike shop and pick up two sets of wrecked, bent or discarded front forks (from 27" or 28" wheeled bikes). You should be able to get them for nothing as they are generally rubbish. On your way home, call in at the hardware store and buy four 60 mm or 80 mm, $\frac{1}{4}$ " diameter bolts with threading for the full length and eight nuts to fit. A tube of some epoxy-filler adhesive such as Plastibond will also come in handy.

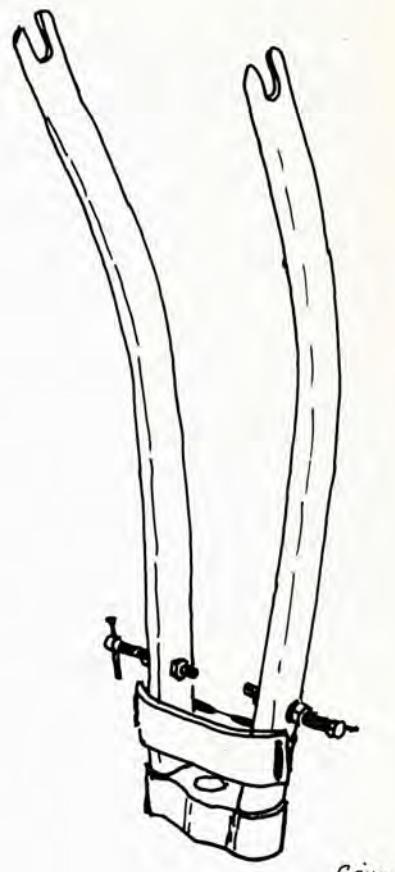
On arriving home you will need to 'set' the width of each set of forks, one set wide enough for the back wheels and one for the front wheels. Do this by pulling the blades apart with brute strength until the respective wheels drop in snugly. The axle slot for the rear wheel will probably need to be enlarged by filing.

Then drill a hole (same size as the bolts) through each blade of the forks at the point where the bolt passing through will contact the rim (see diagrams). After this fit a bolt neatly through each hole with a nut on the inner and outer side. A washer between the outer nut and the blade can also be included. The Plastibond is now used to secure the inner nuts to the blades. It is wise to clean the blades down to the bare metal before using the epoxy. (If the metal in the

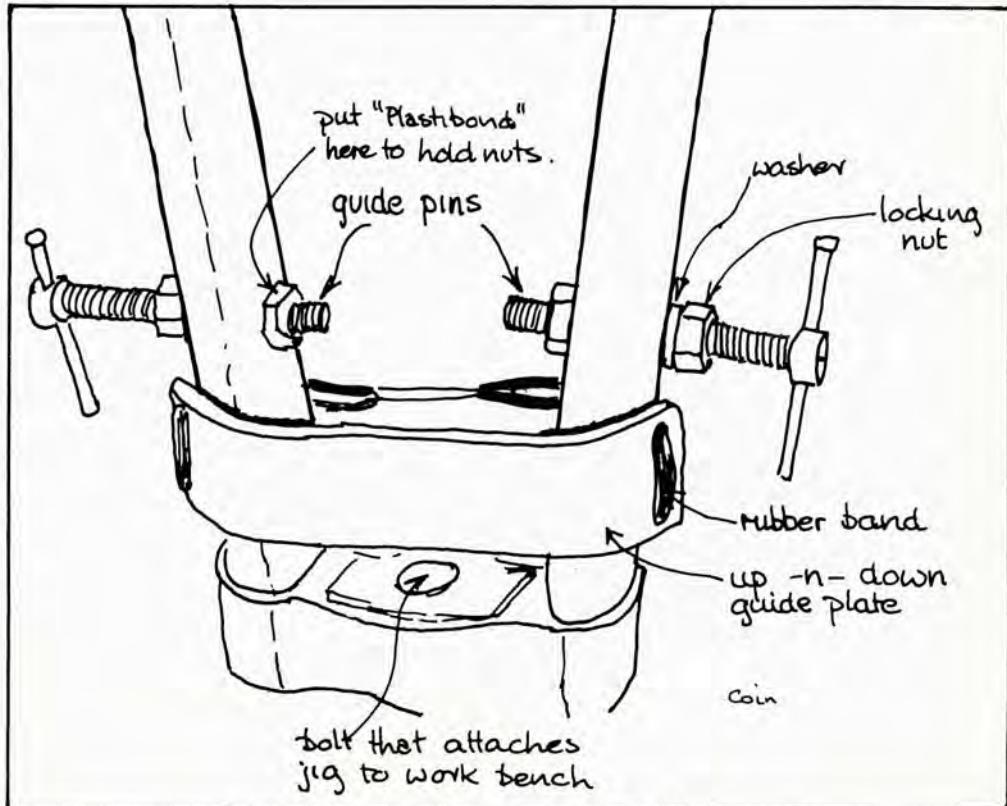
blades is thick enough and you have the appropriate tapping equipment, a thread for the bolt can be tapped in the blade itself.)

The free ends of the two bolts provide two limiting or guide pins needed to locate buckled areas as in a professional jig. If you wish wing nuts on the outer ends of the bolts, cut off the heads and epoxy appropriate wing nuts in their place.

To provide an up-and-down guide plate I have used a thick piece of aluminium plate held around the forks by a rubber band. To give a better grip onto the fork blades a piece of rubber inner tube can be glued to the inside of the plate.

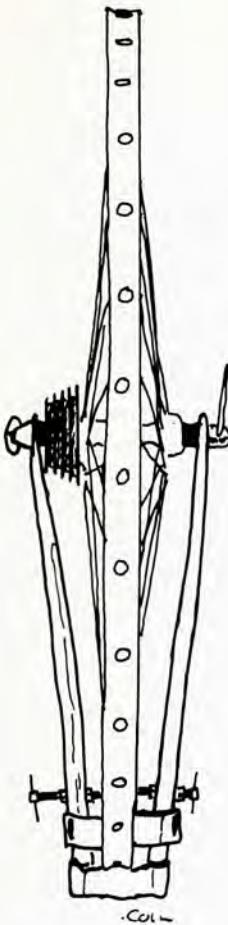


Diagrams by the author.



Use of the Wheel Trueing Jig

There are three aspects of trueing, removing sideways buckling, removing up and down variations, and making sure that the rim is centred with respect to the outside of the cone lock-nuts.



Sideways Buckling

Drop the wheel into the jig and do up the wheel nuts. Progressively screw in each of the guide pins until the worst of the buckles just touches the pins. The ends of the pins now mark the zone of buckling. To remove a buckle on (say) the LH side then at the zone of buckling, loosen the spokes on the LH side, by increments ($\frac{1}{4}$ - $\frac{1}{2}$ turns at a time) and tighten up the RH side spokes by a similar amount until the rim is free of the guide pin. By progressively screwing in the guide pins and shifting the buckles away from the pins, the wheel will come into trueness. The wheel is considered true when the sideways deviation of the rim is less than 0.5 mm.

Up and Down Buckling

With the wheel still in the jig move the sliding plate toward the rim. As the wheel turns, the movement of the rim to and from the plate will mark the high and low zones. At a low zone loosen all the spokes by increments of $\frac{1}{2}$ -1 turn, and then in a high zone tighten all the spokes of $\frac{1}{2}$ -1 turn. This method of decreasing errors will lead to a true wheel. After finishing this stage make sure that the wheel is still true from side to side.

Most new rims can be trued up-and-down to a tolerance of 0.1 mm.

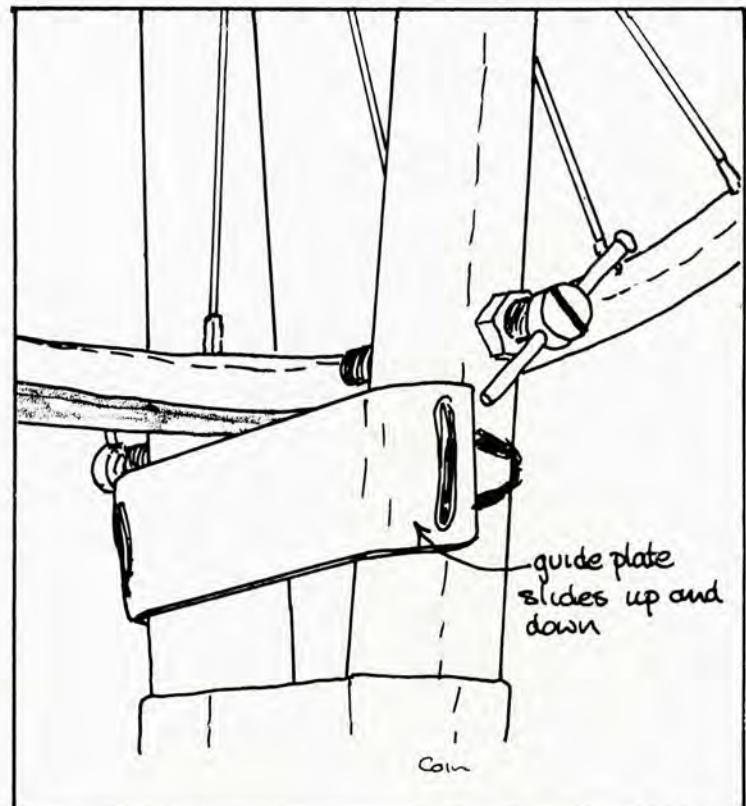
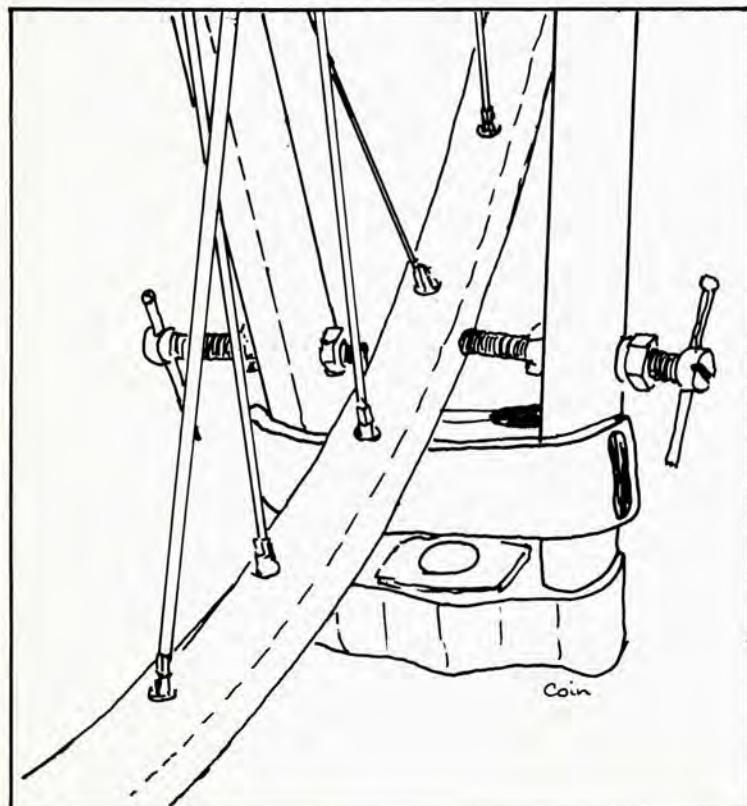
Centring of the Rim

With the wheel still in the jig, loosen off one of the guide pins, with the other one close to the rim. Now take the wheel out of the jig, and put it back in the jig the other way around. The fixed pin will either be bearing on the rim or a bit away from it. If it's the latter, then tighten the on the axle. If the pin bears on the rim loosen it off until it clears the rim with the wheel fully in the forks, then turn the wheel around and replace it in the forks as it was before. Now the rim in both cases will be a distance from the guide pin. Screw the guide pin in half way (count the number of turns until it touches the rim — then back off half). At this point loosen all the spokes on the side that is away from the pin by the same amount (generally $\frac{1}{2}$ -1 turn) and tighten the spokes on the near side to the pin by the same amount. Continue this until the rim comes over to just clearing the guide pin. At this stage check that the wheel is centred by taking it out of the jig and reinserting it the other way. The relation of the rim to the guide pin should be the same.

How Tight Should the Spokes Be?

When spokes are pulled up to the right tension they give a 'twang'. At this stage they should have lost most of their sideways movement.

After each wheel trueing check to see that no spoke ends are protruding through the nipples on the inside of the rim. If any are, file them off.





The Spoking of Wheels

by Chas Coin

Building (or lacing the spokes) of your own wheels is not a difficult task. Most people who have been shown the method written up in these instructions take about 25 minutes for their first wheel. The many people who have tried these written instructions take about 45 minutes to 1 hour. With practice, using this method you should be able to get down to 8-10 minutes per wheel (this does not include trueing which can extend the time by much, the quality of the trueing being proportional to the time spent).

First of all you will need some appreciation of the principles behind the peculiar lacing of a bicycle wheel. Get hold of a wheel and study it while you are reading this.

Note first that the spokes radiate tangentially from the hub, alternating to the right and to the left as you work your way around the hub. They also alternate under and over the hub flanges. Follow a spoke over the top of a flange and you will find that it goes under the last spoke it crosses before entering the rim.

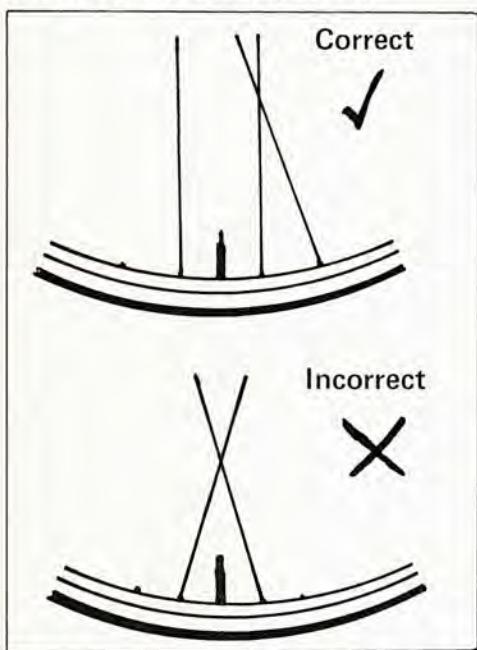


Figure 1 Diagrams by the author.

Now look at the wheel from arm's length — look at the spokes with relation to the rim. You will notice that in every fourth space between the spokes along the rim, the spokes appear to be parallel, and in the three spaces on each side they appear to cross. The valve should appear in a space where the spokes are parallel — this enables a pump free access to the valve (figure 1). Also notice that on the rim, the nipple holes are offset about the midline in an alternate fashion, and this

offset corresponds to the flange of the hub from which the spokes originate.

Lastly looking at the spokes at the hub, the spokes coming over the outside of the flange (the head being on the inside of the flange) should go anti-clockwise, whatever side of the wheel.

Selection of Materials

It is presumed that you will have a hub and rim with the same number of holes. Spoke lengths vary with differing combinations of hub and rim so consult table 1 for the correct length(s) for your combination.

For tools you will need a spoke key which gives a good fit to your spoke nipples, a screw driver and a large strong rubber band.

Lacing the Spokes Into the Hub

With this method we first insert all the spokes into the hub before attaching any spokes to the rim.

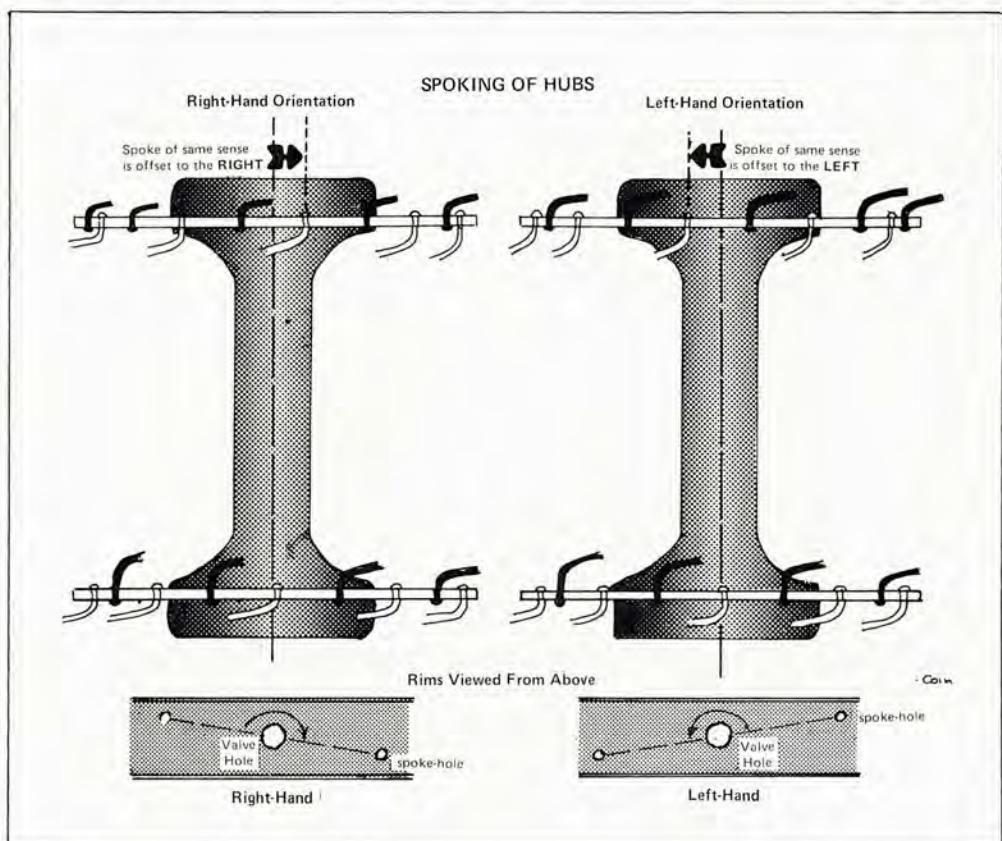
Begin with the flange on one side of the hub, and from the outside insert a spoke in every alternate hole (for a 36 hole combination it will mean that 9 spokes will have been inserted). Coming from the other side of the flange, insert another set of spokes in the remaining alternate holes.

Next, inspect your rim. With the valve hole uppermost, and looking down on the top of the rim, you will note (as mentioned before) that the nipple holes are offset about the midline and therefore appear offset about the valve hole. Depending on where the valve hole was drilled, you will have one of the two configurations illustrated in figure 2. Note which of the configurations — right hand (RH) or left hand (LH) — you have.

Now take hold of the hub, and viewing from the side in which you have just inserted the spokes, you will note that if you project one of the spokes across directly to the other flange, it will fall between two spoke holes (this can be seen in figure 2). If you have a RH rim, then insert a spoke of the same sense as the one you have projected into the RH of the two holes. (Conversely, if you have a LH rim, insert the spoke in the LH of the two holes etc.) This spoke insertion sets the pattern for this flange so continue to put spokes in alternately as for the first flange.

You should now have your spokes in the hub according to the RH or LH options of figure 2*. Gather all the spokes from one flange and confine them with the rubber band — this saves some confusion later on.

Figure 2



Connecting the Spokes to the Rim

Which way do the spokes go? The rule is that any spoke that comes over the outside of the flange goes to the left (anticlockwise), and spokes that come from the inside of the flange will go to the right (clockwise). This is the same for either side of the hub.

If you have a RH rim then take an outside spoke (going left) and insert it in the spoke hole nearest to the valve, that corresponds to that side of the hub. (This will make the spoke parallel to the valve stem.) Attach a nipple and screw 1-2 turns only.

If you have a LH rim then take an inside spoke (going right) and put that into the spoke hole nearest to the valve corresponding to that side of the hub.

Both cases are shown in figure 3.

Once that first spoke is in, continue around the rim with the next spoke on the hub equivalent to the one you have just inserted, and insert it in the fourth hole along. Work your way around the rim in this manner until this set of spokes is in place.

Next, with the other spokes on the same flange, pass each spoke past two going in the opposite direction and then weave it over the third before inserting the spoke into the rim — two holes away from the spoke that has last been passed. (The exception to this is a 4X arrangement in which case three spokes are passed before weaving past the fourth.) Continue this pattern with the remaining spokes on this flange and one side should be laced.

Now comes the second side, which is done exactly the same as the first. Take off the rubber band and select an outside spoke going left (for a RH rim) that should fit comfortably in the spoke hole nearest the valve. Test the equivalent spokes on each side of this spoke to confirm. As a check take the third *under* spoke to the left (this will be the crossed spoke in the final wheel — see figure 4) and this should fit comfortably in the third nipple hole to the right of the valve hole. The two spokes should also be symmetric. This may be a difficult step to conceive so consult figure 4.

If you have a LH rim then select an outside spoke going right that should

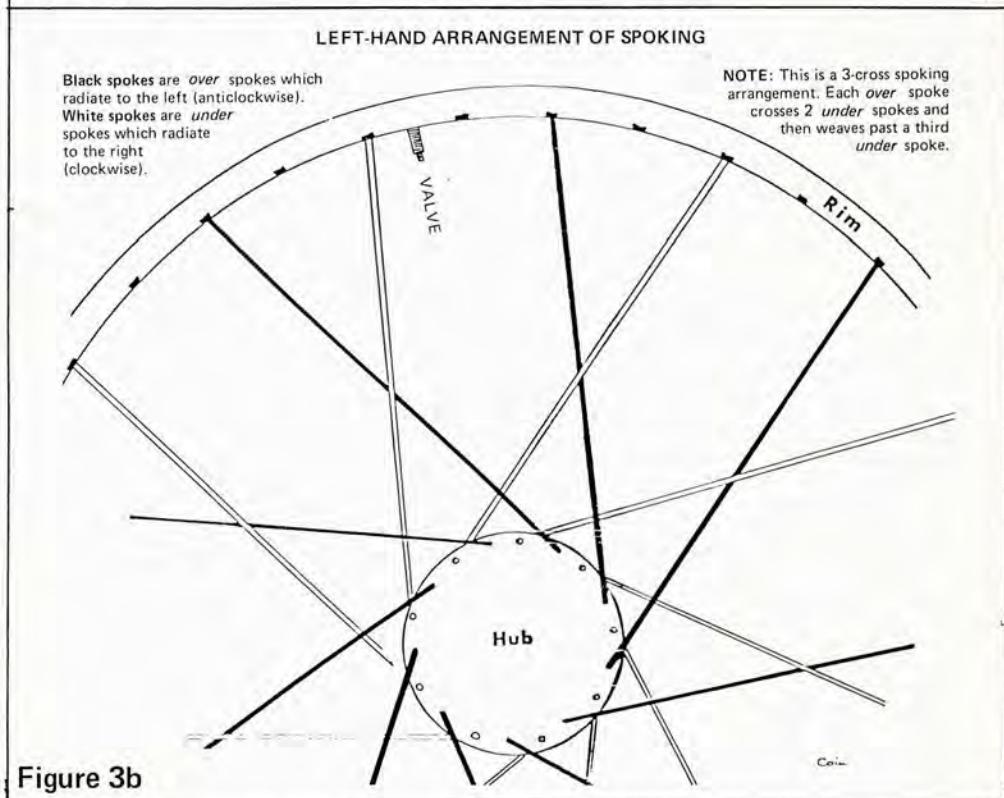
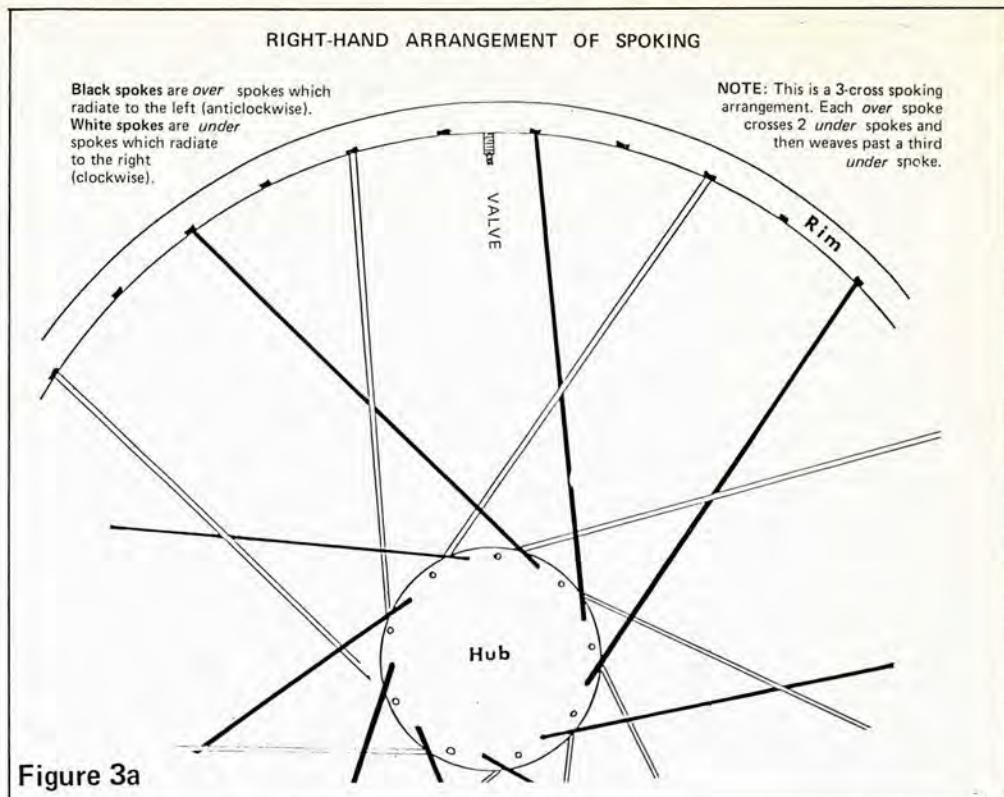


Table 1 — Recommended spoke lengths for 'single'-type rims (615 mm ID)

Drilling	28		32		36		36		40		36	
X'd Spokes	3		3		3		4		3		4	3
Hub Type	F	R	F	R	F	R	F	R	R	R	Dyno	
Low Flange	306	306/304	305	303/301	303	300/298	313	302/300	297/295	305/303	299	
High Flange	305	303/301	300	298/296	295	294/292	305	307/305	292/290	300/298	289	

F = Front; R = Rear; Dyno = Sturmey Archer Dynohub.

RIGHT-HAND ARRANGEMENT OF SPOKING

Black spokes are *over* spokes which radiate to the left (anticlockwise).
White spokes are *under* spokes which radiate to the right (clockwise).

NOTE: This is a 4-cross spoking arrangement. Each *over* spoke crosses 3 *under* spokes and then weaves past a fourth *'under'* spoke.

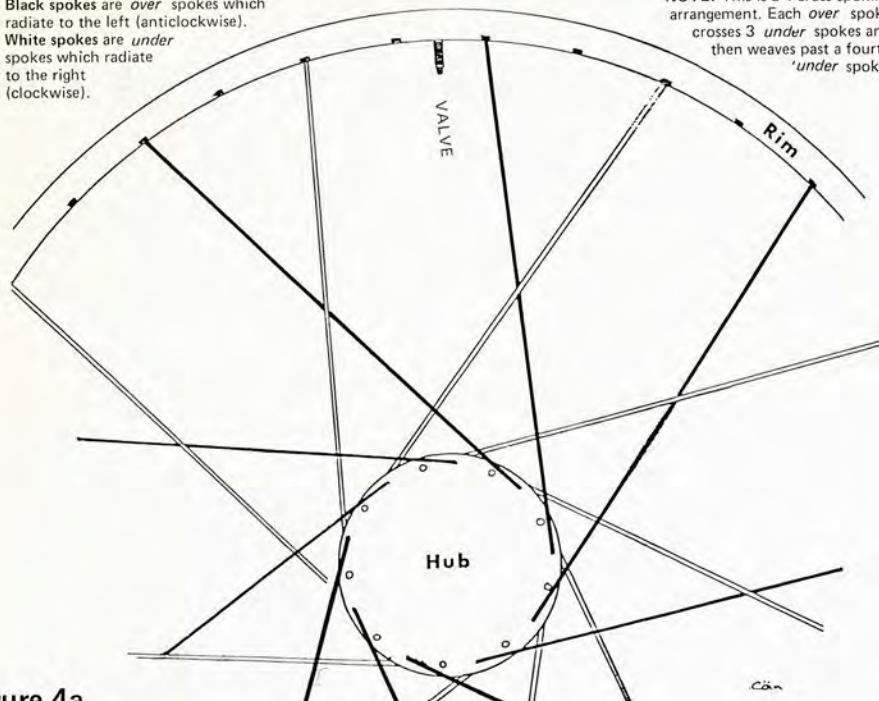


Figure 4a

LEFT-HAND ARRANGEMENT OF SPOKING

Black spokes are *over* spokes which radiate to the left (anticlockwise).
White spokes are *under* spokes which radiate to the right (clockwise).

NOTE: This is a 4-cross spoking arrangement. Each *over* spoke crosses 3 *under* spokes and then weaves past a fourth *'over'* spoke.

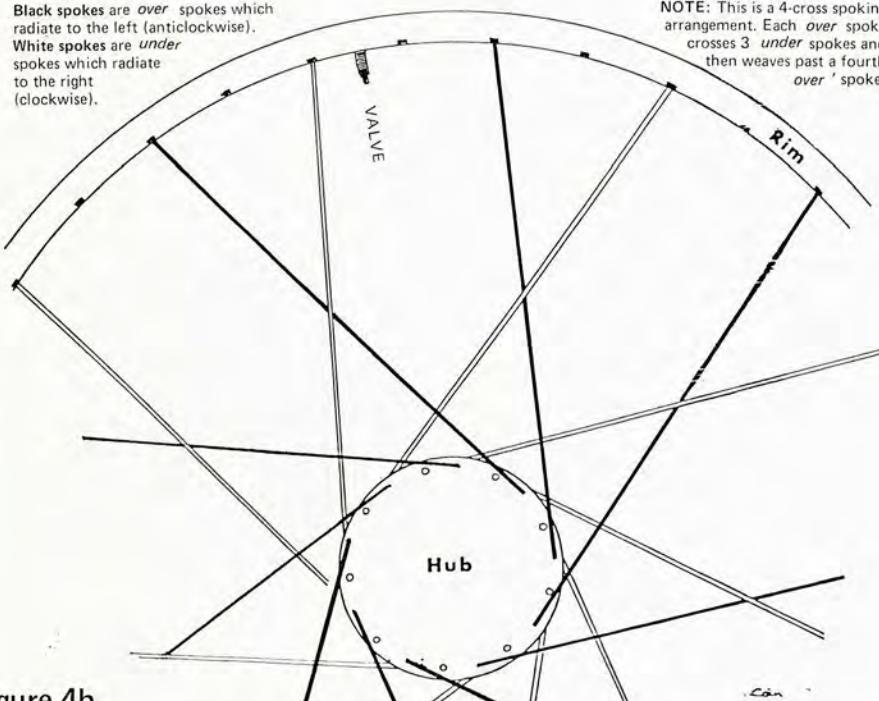


Figure 4b

For 27" HP rims (620 mm ID) use spoke lengths 2 mm longer than shown. If nipple seats are depressed then use spokes only 1 mm longer.

The two figures given for rear wheels are for the LH and RH (gear side) of a dished wheel.

Spokes do not come in 1 mm increments. Generally the available increment is 5 mm (eg 295 mm, 300 mm, 305 mm etc). Therefore select the closest increment. Some spokes are still made in British lengths, so a conversion table is given.

Inches	11-3/8	11-1/2	11-5/8	11-3/4	11-7/8	12	12-1/8	12-1/4
mm	289	292	295	298	302	305	308	311

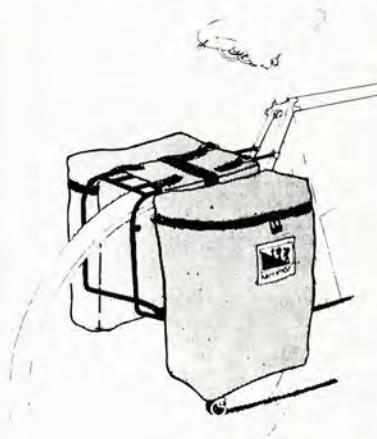
**cycle bags
& frames for
touring or town**



UNIVERSAL PANNIER

The pair is joined by a length of fabric. An elastic inset for handy stowage of small items. Two straps with buckles secure the panniers to either a rear wheel or front wheel pannier carrier. For serious touring the total carrying capacity can be increased when used on the Front Wheel in conjunction with the usual Rear Wheel Panniers. An ideal pannier for around town cycling.

Height:	320 mm
Width:	260 x 120 mm
Capacity:	35 l/pannier
Fabric:	7 oz P.U.
Colour:	Tan, Green
Weight:	650 g



karrimor

fit comfortably in the spoke hole immediately next to the left of the valve. As a check take the third *over* spoke to the right (this will be the crossed spoke in the final wheel — see figure 4) and this should fit comfortably in the third nipple hole to the left of the valve hole. The two spokes should also be symmetric. Consult figure 4 for confirmation. (For a 4X spoking, the instructions are the same except that the check spokes are the fourth *under* (RH rim) and fourth *over* (LH rim).)

Once the first spoke is in, the procedure is exactly the same as for the first side.

The instructions have now finished and the wheel should be completely laced with the spokes loose. There are a few things to check before going further.

- 1 Will the valve be parallel to the immediately adjacent spokes?
- 2 Does every spoke weave across one other, outside spokes going under?
- 3 Do all outside spokes go anticlockwise on both sides of the wheel?

At this stage tighten all the spokes up to a uniform level with a screwdriver — generally until the spoke appears in the screw slot in the top of the nipple.

If at this point you find that every fourth spoke or such is too short or too long then you have gone wrong. You will find in such cases that the first side of the wheel is OK but the second will need to be undone. The error is that you have a RH spoking on the hub for a LH rim or vice versa. Check with figure 2.

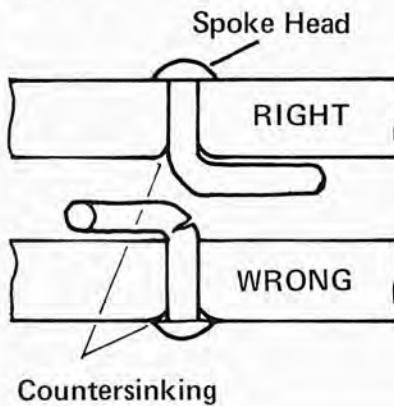
If all is correct then the wheel is ready for trueing.

* Footnote

It is assumed that the hub being used is suitable for both LH and RH rims, ie each spoke hole is countersunk on both sides of the flange. If your hub has holes that are countersunk only on each alternate side of the flange then you will need to determine whether your hub is LH or RH according to figure 2 and purchase a rim to match. Alternatively build one side of the wheel (gear side for rear wheels) according to directions and the other side change from RH to LH or vice versa.

For a hub with countersinking on only one side of each spoke hole, the spokes should be inserted as shown in figure 5.

Figure 5

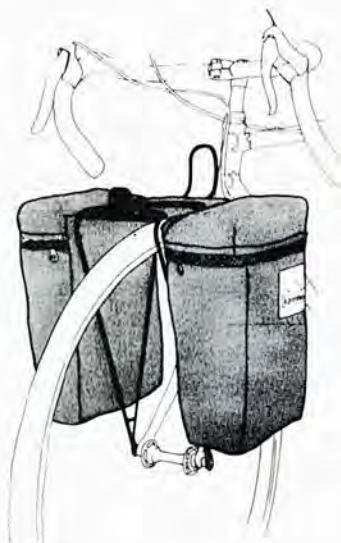


cycle bags & frames for touring or town

FRONT WHEEL PANNIERS

The pair is joined by a length of fabric. The elastic inset is handy for slipping a pair of gloves or a cap under whilst riding.

Height:	280 mm
Width:	200 x 100 mm
Capacity:	10.5 l./bag
Fabric:	7 oz. p.u.
Colours:	Tan, Green or Red
Weight:	500 gm p./pair



REAR PANNIERS

Wedge-shaped for heel clearance, rear panniers are always sold in pairs, although each half pair clips separately to the pannier carrier by means of two hooks at the top and a rubber sprung hook at the bottom. The tension on the rubber loop is adjustable by means of a press-studded strap. With our own pannier carriers, there is a small horizontal strut about 3 cm above the bottom point to which this hook and rubber loop is attached. Should anyone not be using our pannier carrier, it is quite probable that there will not be anything similar to this horizontal strut. We supply automatically in the rear pocket of one or other of the half pair of panniers, two small oval plates. The small hole for attachment to the mudguard eyebolt on the cycle frame and the larger hole is used to attach the hook and rubber loop.



NYLON

Height:	450 mm
Width:	150 x 280 to 150 mm
Capacity:	45 L./pair
Fabric:	7 oz. P.U.
Colours:	Red, Tan
Weight:	850 g/pair

karrimor

BOOKS

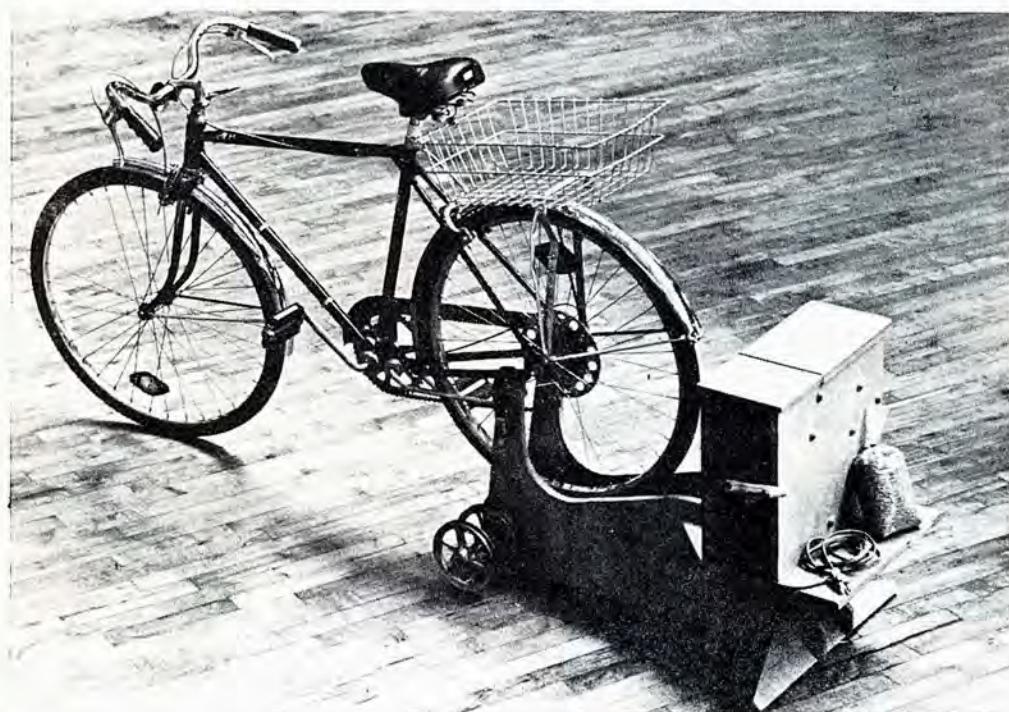
Pedal Power: In Work Leisure and Transportation
Edited by James C. McCullagh.
Rodale Press 1977.

If you think of a bicycle as a means of transport — (either for yourself or your goods) — think again. The personalised energy used on a bicycle can also be harnessed to power: typewriters, wood lathes, lawn mowers, band saws, small motors, sewing machines, water pumps, potter's wheels and — to churn butter, operate a winch, operate a plough, pedal a boat, generate electricity, shell corn and even wash garbage bins.

The Energy Cycle generator may not be a new idea — the wheel has been around for a long time — but the concept of using human power to operate all of the above (and more) through the bicycle medium is relatively revolutionary.

James C McCullagh has edited a book entitled *Pedal Power in Work, Leisure and Transportation*, which fully explores these possibilities. He includes a detailed section on the 'railbike' as well as a section with instructions for building your very own energy cycle.

The concept follows the 'appropriate technology' idea, which is simply using human resources with a mixture of simple technology (ie wheels, cranks, levers). In this case, it is the bicycle — and as the title page states — *watch TV from electricity produced at home* — or fly a pedal powered aeroplane in your own backyard! The book was published by the Rodale organisation shortly before its take



over of the American magazine *Bicycling*. McCullagh is now the editor of that magazine.

Gene Melone
Warren Salomon

Motorcycle and Bicycle Safety — Report of the House of Representatives Standing Committee on Road Safety, May 1978. Australian Government Publishing Service. RRP \$4.45.

"Cyclists needs should wherever possible be incorporated in appropriate town planning measures. When this is not appropriate, however, other measures for bicycle safety need to be adopted."

So states the *Motorcycle and Bicycle Safety — Report of the House of Representatives Standing Committee on Road Safety, May 1978*. This is a useful, documented source of bicycle information. As the safety debate continues, we can be assured at least that government officials have had input by reputable bodies — eg the Bicycle Institute of Victoria. This document contains many useful inputs by such bodies, and is generally in harmony with current opinions about bicycle safety.

One interesting aspect concerns the case for bicycle registration. Rego for bicycles was considered to possibly increase respect for cyclists by motorists because then they (the cyclists) would be paying for road use. This might be a misunderstanding, as cyclists pay state and federal taxes, which are distributed for road use.

Victoria has submitted plans for bicycle registration as part of the Geelong bike plan, but registration for bicycles in WA was discontinued in 1956 as it was considered not viable. Subsequently, NSW, Queensland and South Australia have considered bicycle registration, but rejected the plan.

Topics and recommendations from this report include:
accident involvement;
helmet usage;
production and imports;
road and environmental aspects;
cyclist training, and
primary safety.

The Motorcycle and bicycle safety report is a considerably useful document for everyone concerned with all aspects of bicycle safety.

Top: Rodale's Energy Cycle driving a potters wheel.
Bottom: The Bik-O-Generator, manufactured in USA, will power a grain mill or generate electricity. A pulley attached to a power take off wheel could be attached to other belt powered tools as well.

BOOKS

A Practical Puffin Book: *Bicycles, all about them.*

I've always found it a pity that books should be categorised into adult's and children's. The years I spent teaching were filled with hours of surreptitiously sneaking into the kid's library and devouring volumes of material; which may not have been philosophically fulfilling, but were insightful and pleasurable.

The Practical Puffin book, *Bicycles, all about them* is no exception. Whilst there is nothing intricate in this book, it covers some pretty complicated ideas in a very simple manner – from bicycle history, bicycle styles, maintenance and safety. The illustrations are large, complete for all practical purposes and well footnoted.

The book is divided into sections dealing with history, gears, safety and maintenance, with especially well illustrated pages on how to mend a puncture. Points brought up on safety cover practical riding hints as well as visibility at night and in wet weather. There is even a section about bicycle touring.

Be visible

Night-riding is never safe nor is riding on days when the light is bad. Make sure you can be seen for a whole block – get a friend to check you.

In most countries the law says that bikes must have lights on the back and the front. Head-lights and tail-lights can be bought at a bicycle shop. Some are powered by batteries – keep spare batteries in your tool kit. Some lights get power from a dynamo attached to a wheel. When the bike stops dynamo lights go out.

Light yourself up too. You can never do enough to let drivers see you coming.

Although no section is detailed, each covers the subject more than adequately. This bicycle book is perfect for short people who own and ride bicycles, and not to be missed by any adult! – A must as an addition to your tool kit.

Gene Melone



Some bicycle shops sell battery lights that can be strapped to your leg. These have a red light and a white light facing in different directions. A light which goes up and down as you pedal will make drivers look twice.

White or yellow clothes show up in the dark. Fluorescent material glows in the dark. If you can get some glowing material make a tie-on breast plate. You can buy tapes that glow too. Stick them on parts of your bike and a jacket.

Reflectors help as well. Screw several to your front and back mudguards. Sew some to your night-riding clothes too.

If your bike has hand brakes you could make your own stop lights like these.



Leisure Guides *Cycling* by J B Wadley. Macmillan, London, 1975.

Wadley looks at cycling as a sport and deals mostly with touring and racing.

The book begins with a short history of the bicycle from the days of running astride two wheels to the modern machine, of which Wadley (unbiased of course) says:

The modern bicycle is perhaps the best all-rounder of instruments used in sport and leisure activities...

What is the best bicycle to buy? The author says it is important for the cycling novice to start with the right type of machine for the individual person rather than what one supposes to be the best make. He gives some ideas about the pros and cons of various kinds of bicycles but the discussion is not comprehensive enough to be very useful. Following this there is a short section on bicycle maintenance which appears to be aimed at discouraging the average cyclist from attempting very much of his/her own mechanics. A far cry from Richard Ballantine's approach, and I prefer Richard's way of tackling this topic.¹

The chapter on touring is a relatively long one illustrated with photographs that make you want to jump on your bicycle and go somewhere new. Wadley talks about different approaches to touring – singly or in groups; with or without luggage; planned or spontaneous. Descriptions follow of some touring areas in Britain, Europe and North America.

A racing section goes into details of racing machines and tactics for different kinds of races – road paced; track and team; amateur and professional. Some of the more famous European races and the racing characteristics of different countries are also described.

In my opinion the book lives up to what it claims to be; a leisure-guide; as it does give a comprehensive view of cycling as a sport. It offers little practical advice, though, on the selection and maintenance of a bicycle.

I suspect, too, that with its heavy emphasis on cycling in Europe and America it is not the most relevant book of its kind for the Australian reader.

Reference

1 BALLANTINE, Richard; *Richard's Bicycle Book*. Pan Books, London, 1975.

Debbie Quarmby
Pedal Power, Tasmania

The Bicycle Planning Book

There are many reasons why planning for bicycle facilities is receiving growing attention. At a time when **appropriateness** of our technology is being questioned daily, the bicycle, which is perhaps the most appropriate and efficient machine ever invented is making a comeback.

In third world countries where bicycle use is most appropriate and is highest, new cities are being planned to provide for bicycle to car ratios of 70:30. Even in the developed world bicycle usage is on an increase. The Geelong Bike Plan in Victoria has already received wide acclaim from experienced planners in the USA where interest and use in bicycles is high.

In Europe where it all began and bicycles are more a way of life, one would think that the bicycle would be well and truly integrated into the overall traffic system by now.

Not so it would seem, especially in parts of London where bicycle riding is a very unsafe occupation.

Since the recent bicycle booms which have occurred in most western countries, increased public attention is being focused on the bicycle as a means of urban trans-

port. The way it has been provided for in Europe and particularly Britain, has been documented and analysed in *The Bicycle Planning Book* by English bicycle campaigner Mike Hudson.

Hudson and a group of Friends of the Earth (FOE) bicycle activists began by campaigning for a better deal for cyclists in Britain. The arguments for encouraging planners to make provision for cyclists were set out in *Give Way*, a report published by FOE in 1974. Since then public interest in cycling has been growing fast and *The Bicycle Planning Book* aims to fill a need for a document which would be used to encourage the implementation of networks of cycling facilities.

This book is a welcome addition to the growing interest and debate on how planning and construction can best achieve safe riding with its benefits of encouraging energy conservation. Britain is becoming increasingly dependent on imported crude oil, perhaps more so than we are.

The book outlines the state of the art both in Britain and continental Europe. It is well presented and illustrated with high quality photographs and line

drawings. There are also chapters on bicycle safety, law, usage and designing for bicycle facilities. It also provides a convincing case for the need to plan at all.

Though *The Bicycle Planning Book* centres its analysis on the urban situation there are many ideas described which could provide solutions to a wide range of planning situations.

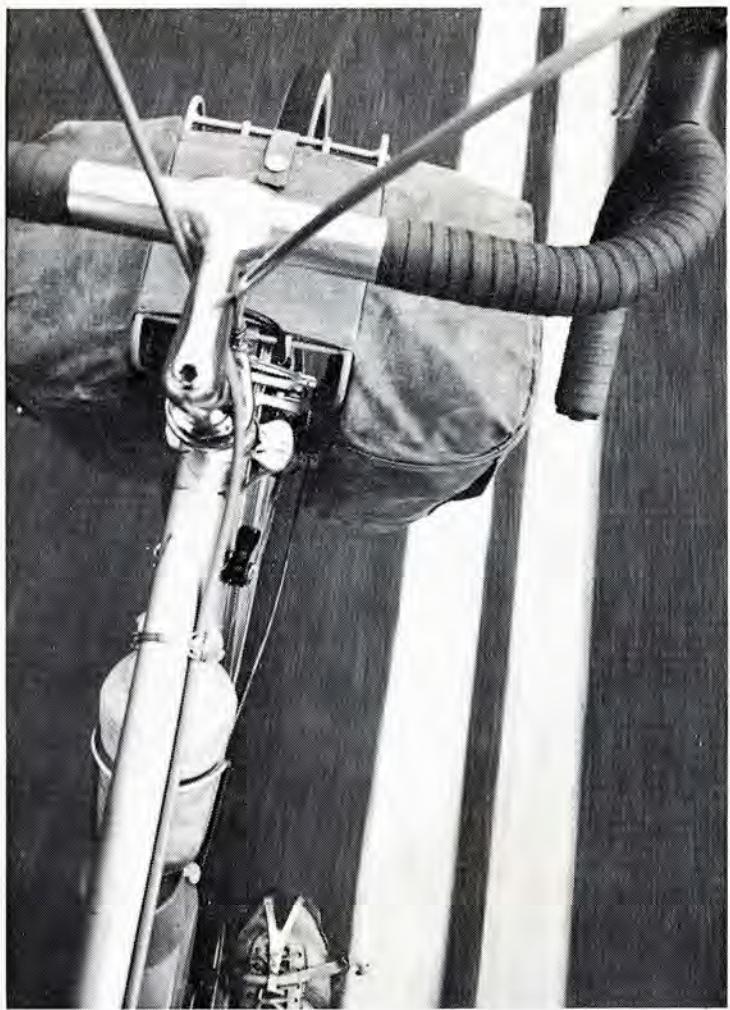
This book is not only for planners. With more public interest and money being spent on providing for the bicycle, bike riders themselves will need to play a part and participate in the planning process. This book is a valuable tool for cyclists to articulately express their needs to the planners and the controllers of the public purse. In a time of restricted public expenditure, providing for bicycles permits local and state government authorities to distribute the benefits of transport investment more widely and more equitably.

The Bicycle Planning Book is published in Great Britain by Open Books/ Friends of the Earth and is distributed in Australia by Macmillan 154 pp. RRP. \$5.95.

Warren Salomon



Left top then clockwise: The Portsmouth cycle route network, Typical road closures in central Stockholm — a permanent closure in the foreground and temporary closure behind, A cycle track in London, Holland: Experimental cycle route in The Hague. Note use of 'sleeping policeman' to warn cars attempting to turn off the main road across the cycle route.



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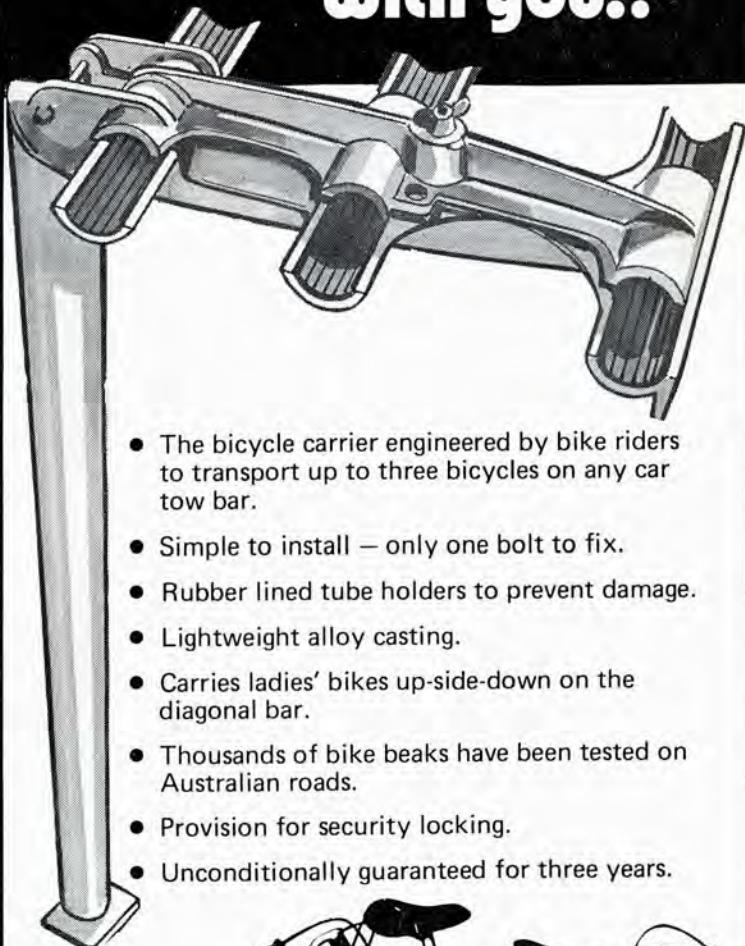
Well researched articles (preferably accompanied by photos or graphics) are welcomed by the publishers. The text should be typed double spaced and photographs accompanied by suggested captions. Touring articles should be provided with a clear map of the route described. These will be returned to authors after publication.

Letters to the publishers for the letters section are also welcomed.

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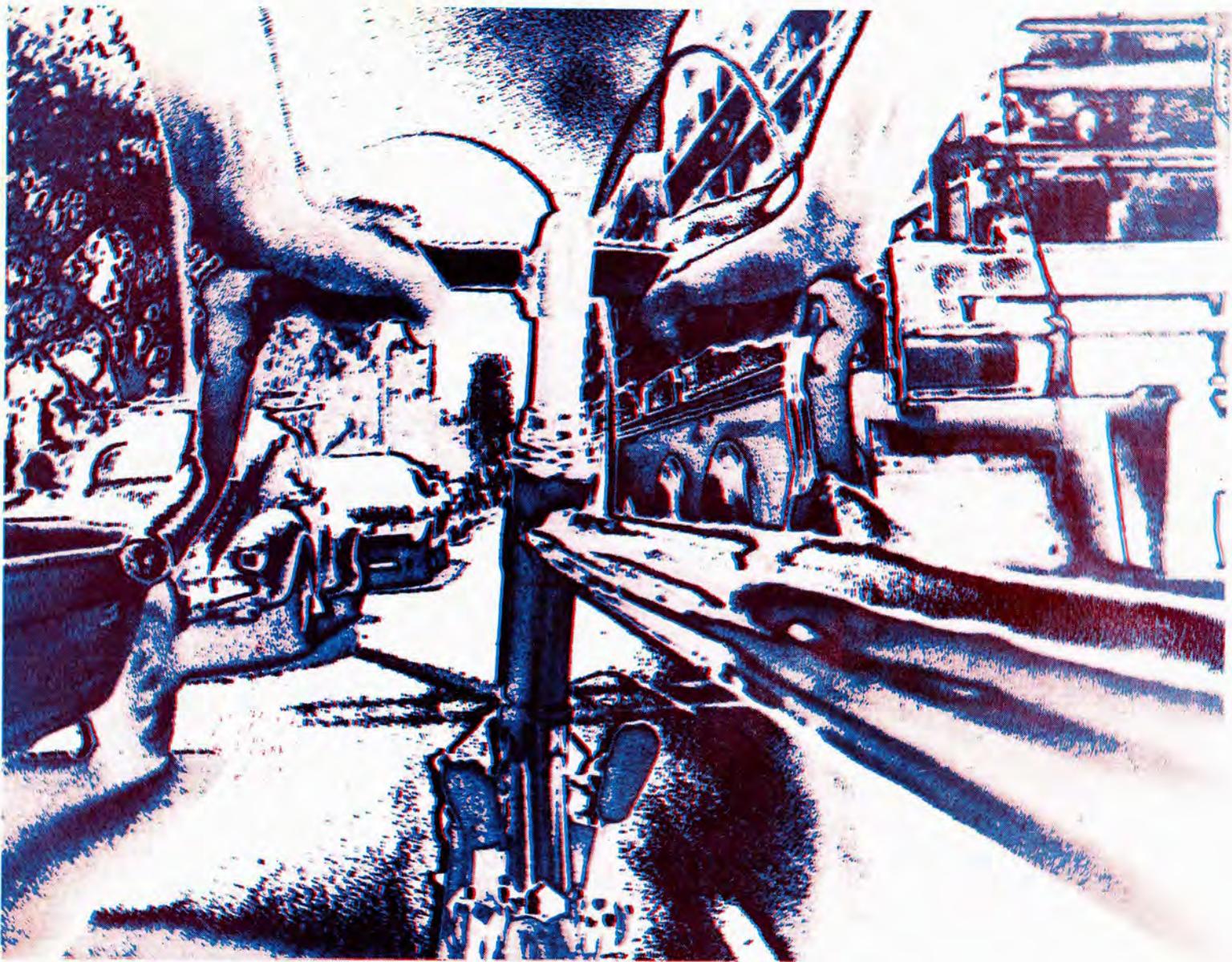


Photo: Nigel Jenkins

The Bicycle Poem

Jenny goes to work and meetings
films and friends and food,
sometimes she is strung out by the day.
Padlocked to the street pole
or leaning in the hall
messing up the landlord's wall
is the bicycle she always rides away.
Car doors shut in other people
Jenny's feet are in the toe clips
knees are moving in a separate dark.
Front light isn't working
blown another bulb
bouncing up the curb
through detour park.
Greasespots on her jeans
where she bumped against the chain
back brake could be tighter
please clouds don't make it rain
got to find another weekend

and the spanner for a bicycle time care.
But her seat is the right height
the handlebars are strong
she feels the long hills
rising in her thighs;
She knows when she gets up,
it's crazy going down
the new wind blows the sweat out
of her hair.
If she leans her body
gently she curves along the road
a skier dodging cars instead of snow.
Men piss from their window,
"Wanna give a bloke a ride?"
burn their powerdrunk Holden petrol fast.
The bicycle is skinny; traffic jam is fat,
she weaves her silent triumph pedalling past.
Sometimes it is lonely riding home.

Ali Lyssa

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